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ARTICLE I.

PLACENTAL PRESENTATION.

BY WM. H. BALTELL, M.D., OF CHICAGO.

Very early in the morning of Monday, July 5th, 1858, I was summoned to attend upon Mrs. M—, in labor with her fifth child. Her husband, who was the messenger, informed me on our way to the house, that his wife on the Friday night previous had been taken with the first symptoms of labor, indicated by occasional fugitive pains, which were accompanied with slight discharges of blood from the vagina; that the pains had gradually increased in frequency and severity, and that the hemorrhage had become profuse and alarming. He also informed me that he had secured the services of a midwife, who, among other absurdities, had told him that "there was no child," that "the bleeding proceeded from a diseased growth in the womb," etc. Upon arriving at the house, I found the woman in a condition such as to excite my most serious apprehensions; her features were pinched, contracted, and perfectly bloodless; her whole body was bathed in a clammy sweat; her voice was scarcely above a whisper, and upon the slightest attempt at exertion, a condition approaching syncope supervened.

I immediately made an examination, and found the os uteri

yielding and dilatable, with, as I had anticipated, the placenta presenting; the waters had been discharged about five hours before, without however diminishing the flow of blood. It was a case of central placental presentation, and upon introducing my hand and passing the finger between it and the uterus, I found that it was detached completely upon the right side of the cervix, but adherent upon the left; the size of the seat of its attachment being, as far as I could judge, rather more than one-third of its uterine superficies.

Impressed with the necessity of prompt interference, if I would save the life of the mother, who indeed already had the appearance of a person moribund, and conceiving the child's death more than probable, and at all events its state secondary to the mother's safety, I separated the remaining attachments of the placenta, and withdrawing my hand was gratified to observe the almost immediate cessation of the hemorrhage.

A few minutes after I had detached the placenta, a pain occurred, discharging it into the vagina; after removing it from this situation, I could readily detect the head of the child presenting in the second position of the vertex. I then administered ergot, more with a view to its effects in insuring the contraction of the uterus after it might be emptied of its contents, than with a desire of its specific action upon that organ in the expulsion of the child, for, notwithstanding the alarming debility of the woman, the uterine contractions had been moderately powerful all along. There was no more hemorrhage of any moment, and a few pains completed the birth of the head. I however delayed somewhat the delivery of the body, for fear of the effect of too rapidly emptying the uterine cavity in the excessive prostrate condition of my patient. The child, as I had expected, was dead; it was well formed, and considerably above the average size.

The uterus contracted very well, and nothing untoward occurred. The woman was enjoined against making any exertion whatever, was placed upon a nutritious diet, and allowed a moderate quantity of stimulants; and though for a long time feeble and anemic from her great loss of blood, yet in about

three months she had completely regained her usual health and robust appearance.

With regard to the amount of blood lost, I can, of course, form only a proximate estimate. The apartment in which the woman was confined had very much the appearance of a butcher's shambles; she was lying in a large pool of coagulated blood, which had also soaked through two mattresses and half filled a chamber vessel which had been placed to receive it, besides, in a corner of the room there was a large and confused mass of sheets, towels, etc., some merely stained, others completely saturated with blood. I believe that I do not exaggerate when I place the quantity lost altogether, from Friday night until the delivery of the child, at considerably upwards of sixty ounces.

It is very much to be regretted that in cases of placenta prævia, confessedly one of the most dangerous and fatal complications that can occur in labor, there should be so many various and conflicting opinions among medical men as to the proper method of procedure. This is due, in some measure, to the obscurity involving the exact relations existing between the placental and the maternal circulation; and still more from a natural tendency to generalize individual experience, and inaugurate theories from data, obviously, in many instances, insufficient. Hence, it may not be uninteresting cursorily to examine some of the various methods advised by different obstetrical writers, with a view of discovering, if possible, which mode is most clearly based upon received physiological principles, and which, in its application, is best adapted to secure the safety of the mother and child, or if they be incompatible, the safety of the mother.

First, as to the operation of perforating the placental mass, either with the fingers or a pointed instrument, and so introducing the hand through the opening to perform version by the feet. Besides the difficulty of rending the tissue in question, Dr. Meigs, in his excellent work, has clearly and succinctly exposed the fallacy and *uselessness* of this proceeding. It renders the child liable to death from the rupture of the blood vessels of the placenta, and the consequent hemorrhage; it is apt to retard the delivery of the head by its being obliged to

pass through that mass; and it may occasion the very difficulty, to avoid which its advocates recommended the operation, viz., the detachment of the placenta in the process of delivering. There are other objections unnecessary to specify, as, notwithstanding its approval by many writers, and, I believe, the teachings of some of the Philadelphia schools, the practice has nearly gone out of vogue; it merely resolves itself into turning with the superaddition of unnecessary difficulties. Next, as to the expedient of turning, strenuously recommended and established as an obstetrical maxim by almost all the writers and teachers of the present time, and most generally practised by physicians at this day. We are told that we must carefully introduce the hand, if possible, at the point at which the placenta is detached, and cautiously passing it between the walls of the uterus and the membranes, rupture them high up, and seizing the feet of the child, perform the version.

Notwithstanding the unanimity of standard authorities in obstetrical science upon this topic, and notwithstanding its commendation upon what certainly seem to be correct principles, viz., the emptying of the womb, so as to permit the condensation of its substance, and the obliteration of the vessels furnishing the material for the hemorrhage,—still, the indiscriminate and exclusive employment of this measure, as a rule of practice, when artificial assistance is indispensable, can be shown to be attended with a fearful maternal mortality greatly dependant upon the operation itself, and in very many cases avoidable. It will be understood that in the use of the terms “indiscriminate” and “exclusive,” no reference is had to the injudicious or uncalled for interference of ignorant or inexperienced practitioners, for to do this would prevent the elucidation of a correct principle, but deductions have been made from the statistical tables of physicians of enlarged experience, admitted judgment, who have made obstetrics their special study. As has been ably shown by Dr. Simpson, the limited experience of any one or a few persons, in the investigation of the worth of an operation, is an uncertain guide in instructing us as to its general and determinate value; reliable conclusions can only be obtained by the critical examination *in the mass* of the results in a large

number of cases. When this test was applied to the practice of turning in placenta prævia, and the immense ratio of mortality attendant upon it was shown, to a certain extent, the medical world was taken by surprise.

The statistical information was mainly procured from the reports of lying-in hospitals under the charge of accomplished accoucheurs, where the danger could not be supposed to be increased by the accidents of ignorance, prejudice or officiousness on the part of the medical attendant.

Out of 421 cases collated by Simpson, "in which the child was removed by turning, the result was fatal to the mother in 144 cases; or, in other words, the mothers were lost in the proportion of more than 1 in 3 (1 in 2.9). Upon the continent of Europe, the Cæsarian operation, reputed the severest in midwifery, has been fatal, according to Dr. Churchill, in 154 out of 371 cases, or 1 in 2.4" (Simp., 1st series. p. 718).

This exhibit, the correctness of which cannot be disputed, clearly shows the frightful fatality attendant upon turning as a *rule* of practice, in the accident of labor under consideration; and it certainly merits reflection before we reject a measure *which can be proved* greatly to supersede the necessity of an operation, the danger of which differs from that of the Cæsarian section by but .4, and is more than twice as great as in lithotomy. And is it surprising that the proportion of deaths should be so heavy?

Dr. Lee has characterized turning under the most favorable auspices as a most painful and dangerous proceeding; and it is easy to imagine how the peril is increased when the recuperative powers of the system are broken down by vast loss of blood, and the woman is terror-stricken at her rapidly failing strength, and unnerved and agitated by the alarm of her attendants. These considerations, if they be correct, conclusively demonstrate the great risk involved in the indiscriminate resort to this measure, even in cases where active assistance is imperatively demanded; and we are brought to the investigation of the plans, by means of which it is claimed that the danger, to a great extent, is diminished. As is of course generally known, the advice of Dr. Simpson consists in the complete detachment of

the placenta previous to the delivery of the child. He was induced to favor and advise this course from a consideration of exceeding loss of life in turning, and from the satisfactory termination in several cases that came to his knowledge, in which spontaneous expulsion of the placenta was followed by cessation of hemorrhage. Having adopted the expedient of removing it, in some desperate cases that happened in his own practice, with a like result, he was led into an inquiry as to the value of the remedy as compared with turning, deriving his information from statistical reports. Of 141 cases, in which the placenta was delivered previous to the child, there were 10 maternal deaths, or 1 in 14, and a number of these could reasonably be attributed to other causes than a loss of blood. This striking difference between the two modes of relief conclusively show the force and benefit of his discovery as affecting the safety of the mother in comparison with turning.

It is not the intention of this paper to enter into the particulars of Dr. Simpson's theory; this can be done profitably by any one by perusing his elegant essay. But the *fact* seems incontrovertible, that the complete separation of the placenta in unavoidable hemorrhage from the presentation of that body, is an efficient, comparatively safe, and generally successful means of restraining the flooding. It has been seen that in my case the detachment was almost immediately followed by a stoppage of the flow, and I believe it justifiable and advisable in all instances of great exhaustion and danger from the continuance of the bleeding. Whilst, however, adopting the practice of Dr. Simpson, it is not, I think, essential for us to receive, as correct and conclusive, *all* the principles laid down by him as explaining its propriety and success.

In this connection it may be stated, that the effect upon the child is by no means so necessarily fatal as has been asserted by the opponents of the practice, which is readily susceptible of proof. Out of the 141 cases of premature expulsion of the placenta, there are 106 given in which the result as affecting the child had been noted; of these, 73 were born dead and 33 living, or, 31 per cent. were saved and 69 per cent. were lost (Simp., 1st series, p. 621).

Out of 70 cases reported by the two Ramsbothams (appendix), a similar account was kept in 40, and the number of the children saved was 8, or only 20 per cent., 80 per cent. having been lost.

As having some bearing upon this subject, it would be well to recollect that in pelvic presentations generally, under ordinary circumstances, the mortality to the child is about 1 in every 5 (Meigs, p. 398). But it is not pretended that placental detachment is an operation for the benefit of the *fœtus*. As to the causes of the cessation of the hemorrhage, it can, I think, be in a great measure explained, without adopting the opinion of Dr. Simpson concerning the entrance of the mother's blood into the substance of the placenta, and its flowing into the uterine cavity from the open vessels of that body. It is a mooted question whether the maternal blood enters any portion of the placenta at all; many writers, as Meigs, Velpeau, Ramsbotham, etc., taking the opposite view; and even the great majority of those who suppose that it does, agree in asserting that in unavoidable hemorrhage, the blood is lost directly from the uterus. If, as Carpenter affirms, the functions of the placenta—that is, the *aëration*, and, perhaps, other changes in the *fœtal* blood—are performed in the substance of that viscus itself, at the junction of the so-called maternal and *fœtal* portions, and the villous expansions of the umbilical vessels are situated about that locality, it must be a positive condition, as necessary for the interchange of elements and the life and development of the child, that in all cases the maternal blood should so circulate.

There can be no more exception to this rule conditional with life to the child, than there can be exceptional instances of oxygenation of the blood without the necessity of air entering the lungs. In other words, if it be admitted that the expanded extremities of the bloodvessels of the cord are the instruments for the performance of *exosmosis* and *endosmosis*, and if they be situated in the middle of the placenta, the mother's blood must enter the placenta, or there will be no nutrition afforded the child; and if, on the other hand, it can be indubitably proved, not in one but in many cases, that the bloodvessels of the mother have carried that fluid no further than the inner

surface of the womb, and that nevertheless the foetus developed, grew and lived, it is *more* than presumptive evidence against the placento-maternal circulation. For instances of this kind, reference can be made to Velpeau, p. 206; Meigs, pp. 207 and 208; a very interesting case reported by Dr. Henry Madge, which forcibly illustrates this view (Braith., part 33, p. 259).

Independently of this question, the spongy structure of the placenta itself is unfavorable for the rapid transmission of blood, and it is lost in large gushes in placenta prævia. Further, in a case of *inversio uteri*, Dr. Merriman *saw* the blood issuing from the surface of the womb (Braith., part 36, p. 217). Finally, it is *unnecessary*, in explaining the cessation of hemorrhage, to adopt that portion of Dr. Simpson's theory referring to its immediate source.

In consulting the works of nearly every author upon this subject, one is struck with the unanimity with which they advise expedients, all proposed with regard to a mechanical effect alone; overlooking, in a great measure, the fact, that the uterus, although invested with special and peculiar functions, is as much under the control of and subject to the general physiological laws of the system as any other organ of the body. Dr. Simpson has adverted to this subject, and shown the inconsistency of the omission; and it is his reflections upon this point that seem worthy of adoption, as satisfactorily solving the problem in dispute, when taken in connection with, though often sufficient alone and independent of, the mechanical effect of the pressure of the child and the contraction of the uterine fibre. There is, undoubtedly, an "attractive power" resident in the placenta when affixed to the uterus, which determines an increased quantity of maternal blood to that organ, for the necessary purposes of the nutrition of the foetus and the essential changes in its blood. This stimulus continues, probably in a proportionate degree, so long as any portion of the placenta is attached to the womb; but when the "normal irritation" of its adherence ceases, the extra supply of blood, sent there for a special purpose, is diverted to the general circulation, and under these circumstances, slight mechanical action is generally sufficient to control the flow. In the same manner, under the stimulus

of the presence of food, the blood is directed in large quantities to the coats of the stomach, its capillaries are distended and receive an unusual supply, but after the process of digestion is completed, the surplus of blood requisite for this functional office falls again under the organic laws of the circulation of the general system.

Examples of this kind might be multiplied, but however this physiological principle may have been overlooked in its relation to the subject under discussion, its bearing upon it can hardly be denied. So long, therefore, as any portion of the placenta adheres to the womb, there is an increased determination of blood to that point; and as the vascular sinuses of the uterus in that position communicate with each other, and are supplied with blood from the same maternal vessels, a large quantity must necessarily escape from the patulous orifices left by its partial separation.

If these premises be correct, therefore, without adopting the circuitous placento-maternal circulation believed by Dr. Simpson, we may, in a great measure, explain the *fact* of there being a greater hemorrhage from partial than complete detachment of the placenta, and why the latter, as a remedial operation, has a great tendency to restrain the flooding, and is *most generally* efficient to do so. The practice of the tampon in rigid os uteri, and the expedient of drawing off the liquor amnii, have not been dwelt upon, because they are tentative measures, and whilst as such proper and advisable in many cases, still are very frequently only preliminary to the choice between turning and detachment, though it may be remarked that the evacuation of the waters adds greatly to the danger and difficulty of the former method.

Let us now briefly examine "The New Physiology of Placenta Prævia," by Dr. Robert Barnes and Dr. Cohen, of Hamburg. They advocate the separation of the placenta from the cervix or dilating portion of the uterus only, or, in their language, "the conversion of a central into a lateral placenta." There seem to be several inconsistencies in and objections to this practice. It is believed by them that the hemorrhage proceeds directly from the surface of the womb, and not from the placenta;

and quoting from Sir Charles Bell, relative to the peculiar arrangement of the muscular fibres of the uterus, it is stated by him in the very article selected that it is the dilating portion or cervix that supplies the hemorrhage, the surface of which they propose further to increase, leaving the placenta attached only to the contracting part of the womb. That the flow proceeds from the dilating cervix ("which relaxation is something quite different from a mere yielding to pressure, and is obviously a vital phenomenon that marks a peculiarity in the actions of this part,"—Carp., p. 979), is proved by the fact that the hemorrhage is greater during a pain; whilst the body of the womb contracts, the cervix yields and dilates, of course allowing the blood to pass more freely and in larger quantities. From the very structure of the placenta itself, it is very probable that in all cases of placental presentation it is quickly detached from the dilating walls. The maternal face is divided into a number of lobes or placentule, with deep sulci or furrows between them. When these are applied to the concave surface of the womb, the corresponding side of the placenta is necessarily convex, and, of course, its superficies is greater than if it were a plane. The furrows become more and more narrow, according to the degree of contraction of the womb, until at length becoming obliterated, further condensation of the muscular tissue throws off the placenta. By placing one of these bodies into a concave glass, as one of the shades for ornamental clocks, a plain view can be had of its uterine face, and it will be seen that the sulci are arranged to admit of considerable contraction of the womb, without impairing the attachment of the placenta. We are all familiar with breech cases, in which, after the waters had passed, the body of the child delivered, and the womb contracted to half its size, the pulsation of the cord continued, indicating the persisting connection between the womb and placenta.

On the other hand, in prævia cases, how slight the dilatation necessary to cause alarming flooding, many cases being reported in which it occurred when the os could hardly be felt to be dilated at all, showing the attachment of the placenta to be such as readily to admit of its being broken by this relaxation, and the degree required to be very moderate.

If this be so, as the labor advances it would seem unavoidable for the separation to occur in the cervix. Besides, the practice of this plan of Dr. Barnes has not been sufficiently tested to clearly recommend its utility, and certainly *seems* founded upon incorrect principles.

ARTICLE II.

EXPECTORATION OF FIBRINOUS CONCRETIONS, OR "FALSE MEMBRANE," FROM THE BRONCHIE OF AN ADULT.

BY L. H. ANGELL, M.D., OF AURORA, ILL.

The patient, a man not quite forty years of age, has usually possessed good health, with the exception of slight attacks of acute bronchitis during the latter part of the winter or early spring months. These have been rarely of sufficient severity to confine him to the house, and have generally required but a mild expectorant or anodyne to arrest them at once. However, during the two past winters the attacks have been more persistent, and inclined to take on chronic features, though the general health was not much affected. During the latter part of February last, there was considerable cough, which was allayed as usual by an anodyne expectorant.

About the first of March, during a paroxysm of coughing, a fibrinous concretion was expectorated, which evidently was formed in the ramifications of the bronchiæ. It was in the form of a perfect cast of a bronchial tube, two and a half inches in length, perhaps an eighth of an inch in the diameter of the largest end, and consisted of a main stem and two branches of smaller size. The specimen was perfectly hollow throughout, of a white color, and opaque. It was evidently fibrin, quite well organized, and so elastic that it could be stretched one-half its length without breaking. Masses exactly resembling this were coughed up every one or two weeks during the spring months, occasioning but little inconvenience aside from an increase of cough for a day or two before the expectoration, which was followed by an interval of perfect quiet. Some specimens

were more firmly organized than others, and contained blood-vessels, which could be traced distinctly almost with the naked eye. The point whence these masses were supposed to be expelled could be distinctly felt by the patient, and appeared to be just within the right nipple or near the centre of the right lung. There was dulness evident here upon percussion over a circumscribed space, and upon auscultation, coarse crepitation or bronchial rales were mingled with the respiratory murmur.

Vesication over this region, with full doses of expectorants and anodynes, were followed with marked benefit. The affection having apparently yielded, these measures were suspended. Soon, however, the cough and irritation increased, accompanied with the same expectorations. There was greater disturbance of the respiration at this time; considerable pain and severe cough. Apparently the same portion of the lung was the seat of the disease, and the same tubes were almost daily reproducing and expelling their fibrinous casts of uniform size and appearance. Only once was there any appearance of hemorrhage, and then but very slight.

This was about the first of June. Blisters were again resorted to, and other counter-irritations and anodynes, etc., were given, together with full doses of chlorate of potassa. The affection again yielded very readily; and since the 26th of June, no more of the expectoration has occurred. He has been free of any bronchial irritation during the balance of the summer, and his health has been good. Recent cool weather has, however, admonished him that a point exists where a little exposure might renew his former attacks.

But once previously have I ever witnessed expectoration of fibrinous membrane analogous to this. This occurred in a patient two days subsequently to a violent attack of hæmoptysis. She spat up a large mass of fibrin of the form of the bronchial tubes, perfectly hollow, but less opaque than the former, being quite or almost translucent. She was immediately greatly relieved. This was evidently a case of tuberculosis; and the patient removing east, died about a year afterwards.

Watson describes this as a rare affection, of which he had never seen but two cases. He regards it as not a serious

disease, never having known a fatal case. He makes a distinction, however, between cases which occur as a result of hemorrhage, the fibrin being simply deposited within the tube, and those which are caused by a peculiar inflammation of the bronchial mucous membrane.

Wood also, in his practice, alludes to this affection, which he supposes is often the cause of a fatal termination in the acute bronchitis of children, the bronchiæ being perfectly filled with the false membrane.

I send you some specimens which were expectorated by the first-mentioned patient, which are remarkable for their uniform size and appearance, and for being expectorated, in almost every instance, entire.

[Expectoration of false membrane from the bronchi is, perhaps, not so uncommon as is generally supposed. Hastings notices it in his work on Inflammation of Mucous Membrane. Marshall Hall gives a plate representing the membrane as expectorated during an attack of bronchitis. This expectorated false membrane would appear to be the result of two very different pathological conditions. It may be a symptom of lobular pneumonia; and it may be associated with bronchitis, or be a sequela of it. When a symptom of pneumonia, the cylinders are full, not hollow, as in the bronchitic form. When false membrane occurs during bronchitis, it is not during the active stage of inflammation; this generally has subsided, and the disease is become chronic, retaining no symptom except this to mark its existence.

Pseudo-membranous bronchitis may also be an acute disease, the false membrane being expectorated during the existence of active inflammation. A case of this kind, and the only such without complication on record, is related by M. Thore, jun. (*Gazette Medicale*, 1849). The patient, aged 9 years, was seized, while in the midst of health, with symptoms of acute catarrh, and the day following commenced throwing off false membranes. The affection continued but twelve days. The membranous exudation was expectorated with an abundant frothy and viscid mucus, resembling a solution of gum.

Dr. Casper (*Wissenschaftliche der Annalen Gesammten Heilkunde*, 1836) relates a case of a girl, 12 years old, who was seized with bronchitis. During the accompanying fever she did not expel any false membrane; but when every other symptom of bronchitis had departed—when she seemed in perfect health, appetite and sleep good, she coughed up every night and morning membranes accurately representing the bronchi.

In the *Med. Gazette*, 1838, there is a case of croup presenting, when contrasted with this case, at least in one particular, considerable analogy. In neither could any fever be detected. The case of croup, however, terminated fatally by occlusion of the glottis.

In the year 1844, Dr. Reid read a paper before the Royal Med. and Chir. Society detailing two cases of pseudo-membranous bronchitis. In both cases the tubular expectoration was accompanied by hemorrhage from the chest. In one, a lady, aged 28, great emaciation was induced. After having suffered severely from suffocation, she coughed up, with froth and mucus tinged with blood, several aborescent membranous substances, resembling casts of the minutest bronchial tubes. She recovered from this, and afterwards died of a complaint unconnected with the chest. The second case occurred in a healthy man in the prime of life. This was complicated with severe hæmoptysis, for which he was bled. He ultimately recovered.

We occasionally see in phthisis tubular expectoration; and often on the buccal mucous membrane of such patients, pseudo-membranous patches may be observed. In cases of pseudo-membranous bronchitis, general bleeding, mercury and iodine have been used without any decided benefit. The prognosis may generally be considered favorable when the formation of false membrane is confined solely to the ramification of the bronchus of but one lung, when there is no complication, and when the accompanying fever is mild.]

[We propose, in a series of papers, to give a history of the rise and progress of Diphtheria, as it has appeared within the last forty years,—to carefully collect the opinions of those whose opportunities of observing it have been most extensive, both in Great Britain and France, and to avail ourselves of every source of information most recently derived from American journals. We will then enquire how far it is dependent on or even fostered by cosmic and meteorological influences; examine the facts supposed to connect its epidemics with individual and hygienic circumstances in the relation of cause and effect; and thus having brought to bear on the matter no inconsiderable amount of research, we will endeavor to eliminate some general principles to guide us in our views of the disease, and direct us to a suitable and efficient treatment.]

The proposed investigation is not without its difficulties; but we possess abundant materials that cannot fail to contribute to the elucidation of the subject, though it should not altogether succeed in dispelling the darkness that obscures it. We purpose, as far as practicable, to illustrate the important features of the disease, by the detail of cases, suitably selected, and obtained from the most reliable sources. When thus we shall have learned the results of the enquiries of others, we will contrast them with each other, see how far they agree, and ascertain whether discrepancies be real or only apparent, from want of agreement in the signification of terms, or from viewing phenomena in different lights, or under the modifying influence of combination.]

ARTICLE III.

DIPHTHERIA.

BY W. GODFREY DYAS, M.D., CHICAGO.

In the year 1821, a memoir was read to the Royal Academy of Medicine, Paris, by M. Bretonneau, in reference to an epidemic disease which had made its appearance in the neighborhood

of Tours. It was first observed in 1818, amongst some soldiers recently arrived from the Isle of Bourbon, but having been mistaken for scurvy, was unsuccessfully treated. From this date to the year 1826, other memoirs were presented to the Academy by M. Bretonneau, detailing the result of further investigation; and in the month of June of the same year, he published his celebrated work, entitled, "*Des Inflammations Speciales du Tissu Muqueux, and en particulier de la Diphtherite ou Inflammation pelliculaire connue sous le nom de Croup, d' Angine Maligne, d' Angine Gangreneuse,*" etc.

In the meantime, observations embodying similar views were published in Great Britain, the enquiry having probably been suggested by Bretonneau's first memoir. But though among modern observers the claim to priority rests with him, yet we are not to infer the disease was unknown to the ancients. It would appear Hippocrates was not unacquainted with it, and one of the best descriptions of it has been given by Aretæus.

It has been termed diphtheria, or diphtherite, from the Greek *diphthera*, *pellis*, the formation of a pellicle or false membrane being invariably a symptom of the disease.

About one year before the publication of Bretonneau's work, Dr. Gregory, of London, made known the particulars of three cases of what he considered croup, wherein the disease having commenced in the fauces, passed downwards to the larynx and trachea, as far as the first division of the bronchial tube. The three cases were fatal. Two of them died from the blocking up of the larynx and trachea, with pseudo-membranous exudation, and one from exhaustion, as we are told, but the post-mortem examination seems not to have been a very searching one. At all events, the child was under the mercurial treatment, vigorously administered, and though no concretions were seen on opening the trachea, yet this was inflamed, and a purulent secretion covered its mucous membrane. These three cases occurred in the same family, and there was reason to suppose that the disease was communicated from one to another.

Thus, two important facts were brought to the notice of the profession,—one consisting in the contagious nature of the

malady, the other in the progress of its local manifestation from above downwards.

The mere title of Bretonneau's work will at once show that he confounded the disease in question with croup; but he not only asserted the identity of these two, he also looked on angina maligna, not as similar, but even as identical with what was usually described under these several names.

Diphtheria is not the only disease whose early history tells of ill-defined terms—relations assumed from too limited a sphere of observation, and deductions in accordance—not true to all the cases they were meant to refer to. The same have been an episode in the history of every disease. The literature of our profession teaches how measles, scarlatina and small pox were confounded together; scarlatina described under the head of purpura; and roseola represented as a variety of rubeola.

We now proceed to give Bretonneau's description and treatment, and we will then enquire to what extent his views, under the aspects we have more recently seen the disease, correspond with the experience of later observers.

He describes it as usually commencing in one tonsil, seldom in both; fever slight; then white spots are seen on the surface of the affected tonsil; the cervical glands enlarge; deglutition not very difficult; redness surrounds the concretion, and it spreads rapidly to the velum palati, uvula, the other tonsil and the pharynx. The swelling of the lymphatics either subsides or remains stationary. After some hours or even days, a ringing cough, dry or accompanied by a frothy expectoration, announces the extension of disease to the respiratory organs. The following were the anatomical characters: Irregularly-shaped patches of redness, dotted and without swelling, coated with a concrete exudation; the most florid of these patches owing their color to a fine vascular injection. One or more long, narrow, red streaks were seen extending to the pharynx or descending to the trachea. A stripe of concrete matter on the centre of each of these streaks, and in the substance of these incipient concretions small semi-transparent bullæ are often seen. The edges of the pellicle were gradually confounded with the surrounding mucus, which, without being altered in its

appearance, was changed in its quality, being no longer viscid, but coagulated near the concretion. These bands or stripes having extended, became more dense and homogeneous, and finally terminated by forming a complete tube, united to the subjacent mucous membrane by little prolongations that dipped into the mucous follicles. If the concretion were detached, the redness of the mucous membrane increased, a false membrane was reproduced, and in proportion as the super-imposed laminae added to its thickness, it became more and more adherent to the surface beneath. Twenty-two dissections were made to ascertain if the concretion was the same as that of croup, and whether the mucous membrane beneath retained an unbroken surface. The result induced Bretonneau to infer that the exudation was identical with that of croup, and that, with some slight and occasional erosion excepted, the subjacent tissues preserved their integrity.

"In comparing," he writes, "the morbid appearances found on dissection in 55 bodies, of every age, who in the course of two years fell victims to epidemic angina, there appeared but one instance wherein the false membrane was confined to the trachea, without any similar exudation on the tonsils or other part of the pharynx. In no case, even of the most malignant nature, was there anything like gangrene of the parts. Ecchymoses of small extent, and an occasional slight erosion of those surfaces where the disease had longest continued, were the gravest alterations of structure which were ever seen. In about six or seven cases—that is, in one case in nine—the concretion extended to the ultimate ramifications of the bronchial tubes. In about a third of the whole number it reached the great divisions of the bronchia; in all the rest it terminated at various depths in the trachea, the mechanical obstruction of the respiration appearing constantly to be the immediate cause of death."

We are also told the concretions generally covered the pituitary membrane, but seldom extended to the external openings of the nostrils. In two cases the membrane lined the œsophagus, as far as the cardiac orifice of the stomach.

Bretonneau had no confidence in the curative powers of nature in this disease. He principally depended on the energetic

application of concentrated muriatic acid, which he cautions us not to apply too frequently; and in case of the extension of the complaint to the larynx and trachea, his chief reliance then was on calomel and mercurial frictions,—the former administered in doses of three grains every hour, and the latter employed every third hour to the neck, arms and chest. As a last resource, he performed tracheotomy, by which, previously to the publication of his book, he had succeeded in saving one life out of three, the number operated on by him up to June, 1826.

During epidemics of diphtherite, Bretonneau and Trousseau saw the disease not confined to the fauces and respiratory passages, but extending to the skin, which was covered with false membranes. Trousseau allows that Bretonneau's observations, in reference to the pharyngeal symptoms being occasionally accompanied by a similar lesion of the skin, had been anticipated by others, but maintains that it was Bretonneau who first suitably arranged facts in connection with this disease, and completely described its symptoms.

We give Bretonneau's description and treatment of disease at some length, as we are aware that many do not suppose the diphtheria recently prevalent in England and some parts of this country to be the same as his diphtherite; and they rest their conjecture on the fact, that the course and termination of the disease as lately seen are not identical with those described by him.

We cannot deny that the progress and mode of termination of the several epidemics of diphtheria have varied more or less in every visitation of the calamity. But in this there is nothing unlike what we observe in the history of other epidemic diseases: Cholera, scarlatina, influenza and typhus can furnish evidence to show that their several epidemics vary not only in the intensity of development, but in the order of sequence of their symptoms, in the absence of some from the group, and in the appearance of others. The influenza of 1848, in Paris, was not the same as in 1831-37. The cholera of 1849, in England and Ireland, was unlike that of 1832. It had lost much of its severity—the form was not so spasmodic; it was rather the collapsed kind, and neither vomiting nor diarrhoea was so

general. Nothing can be more variable than the progress and mode of termination of cases in the several epidemics of typhus: the morbid phenomena in one epidemic will be principally referrible to the brain and its membranes, in another to the respiratory organs, and in a third to those of digestion.

We will not now stop to discuss this question, but proceed to consider diphtheria both as a sporadic and epidemic disease, tracing it as observed at different periods, under different phases, and with varying severity, and show that though its essential characters were never wanting, yet incidental circumstances often associated themselves, with the effect of masking its main features. As seen in its sporadic form, diphtheria appeared much modified—this, from analogy, we should be led to expect. In such cases, it rarely extended to the air-passages, and generally terminated favorably; occasionally, however, it proved fatal by terminating in pneumonia, which, commencing insiduously, made progress without exhibiting any decided symptoms, and destroyed the patient when apparently reaching convalescence. A most interesting case illustrative of this has been related by Baudelocque, which we give at length:

“Victorine Soret, aged 13 years, strongly made, with a well-developed muscular system, working and sleeping for seven months in a damp work house, situated below the level of the street, in the quarter of La Greve, was seized early in Nov., 1834, with malaise, pain in the back and chilliness. These symptoms continued three days, when fever developed itself, accompanied with great difficulty of deglutition, swelling of the cervical glands, and nasal intonation of voice. A physician was called in, who applied thirty leeches to the angle of the jaws; at the same time, he prescribed emollient gargles, poultices and pediluvia. Two days afterwards he took blood from the arm. Under his treatment, there was no change for the better in the state of the throat; her strength was failing and her pulse becoming weak, and she fell into an adynamic state. It was now the fifteenth day of the disease, when she was taken to the Hopital des Enfants Malades. She presented the following symptoms: Nov. 26. Position, supine; face of a violet hue, with an expression of prostration and stupor; voice,

nasal; tumefaction of the sides of the neck; occasionally, a return of fluids by the nares, which, at the same time, are the seat of a yellowish serous discharge of a sickening odour. On examining the throat, both tonsils, the pharynx and the uvula were seen covered with a greyish white false membrane, resembling gangrene. The breath was fetid; spitting abundant and sanious; tongue dry and like a piece of parchment; the abdomen free from pain; the skin rather cold than warm; pulse, from feebleness, cannot be reckoned; no pain of the chest; the patient, whose intellect is clear, assures us she has no local pain. (Cauterization of the pharynx and tonsils with solution of nitrate of silver, four times; gargle of decoction of bark and chloride of soda; julep with 6 grs. of sulph. quinia; lemonade with wine). 27th. The same local and general symptoms persist; throat cauterized with a still more concentrated solution of nitrate of silver. The discharge from the nares indicate the extension of pellicular inflammation to the nasal fossæ; to these powdered alum was applied by means of a soufflor. The rest of the treatment as on yesterday. 28th. Part of the exudation detached from the tonsils, but these remain swelled, presenting a brownish colour, and a rough, unequal surface; the difficulty of deglutition remains; no pain is complained of in the throat; the pulse can scarcely be felt; the same look of prostration and the same depression; two or three loose discharges from the bowels without pain. (Remedies as before, with the addition of blisters to the thighs). 29th. Some shreds of false membrane of a greenish yellow colour still adhere to the pharynx and left tonsil; the surrounding mucous membrane livid; vomiting took place during the visit; the vomited matter ejected partly by the mouth and partly by the nasal fossæ; a violent shivering in the afternoon of each of the last two days; to prevent a return, 12 grs. of sulph. quinia prescribed. 30th. The rigor returned in the evening; it has been of less continuance than on the preceding days; prostration increasing; the face is of a leaden hue; the tongue black, patient unable to sit erectly; skin cold; pulse thready, and but 64 pulsations in the minute; 20 inspirations, in the same space of time, can be counted. The blisters have scarcely

reddened the skin; the examination of the fauces induces vomiting; the matter vomited contains the *debris* of false membranes; some greyish points exist on the pharynx and velum palati; the left tonsil covered over with a membraniform and very extensive concretion. Two liquid motions without pain; slight numbness of the limbs; intellect clear; pupils natural; no headache. From the 1st to the 5th Dec. Sinking more and more visible; pulse thready, and varying from 64 to 72 pulsations, and only on the 5th a notable acceleration; constant moaning; tongue pale and cold; more false membranes in the fauces, but the parts they cover are of a livid hue; diarrhœa; slight cough; no pain of the chest whatever. (Sinapisms to the inferior extremities. Lemonade, with wine, and preparations of bark internally). Death took place on the 5th.

"Post-mortem examination nineteen hours after death.—No cadaveric rigidity; no abnormal tumefaction of the velum palati, tonsils or pharynx; their surface of a deep red, and covered, in some points, with simple mucus, which the pulp of the finger can remove; mucous membrane not destroyed in any point; neither ulceration nor slough; no gangrenous odour. The epiglottis and the circumference of the glottis present the same redness as the pharynx; mucous membrane of the larynx, trachea and œsophagus pale; that of the bronchia red, the redness of which increases as the termination of the air tubes is approached; the cervical and bronchial glands hypertrophied; the pleuræ not the seat of any pseudo-membranous exudation; no fluid in their cavities; the superior and middle lobes of right lung crepitating and rose-colored externally; inferior lobe altogether impermeable to air, heavy and compact; when cut in slices, these fall to the bottom of a vessel with water. The inferior left lobe presents the same alteration posteriorly. Nothing remarkable about the heart and pericardium. *Abdomen.*—The gastric mucous membrane in contact with a brownish liquid; capillary system exhibiting some patches with an arborescent arrangement, and nipple-like eminences around the pylorus; its consistence has undergone no alteration; some redness from space to space along the in-

testinal canal, without any diminution or increase of the normal consistence of its mucous membrane; no alteration of Peyer's or Brunner's glands, which are scarcely visible; the other abdominal viscera gorged with blood, and less consistent than in the normal state. The head not examined."

We subjoin to this case some remarks by Baudelocque:

"This girl was admitted into hospital on the fifteenth day of the disease. An energetic antiphlogistic treatment had been administered, without improving the local affection. The exudation after having lined the velum, tonsils and pharynx, invaded the nasal fossæ, but did not extend to the respiratory passages. Whilst under the antiphlogistic treatment, symptoms of grave import supervened—the tongue became dry, the pulse was scarcely felt, and the skin was cold; patient fell into complete adynamia. Whilst in hospital, caustics were employed, the local symptoms seemed to give way, without any influence on the general system. In vain did they try to raise the strength by the aid of tonics, all were unavailing. Nothing during life revealed the pneumonia seen on the dead body. Cough was trifling, apparently caused by the detachment of the false membranes; respiration was not accelerated; no thoracic pain; no rust-colored expectoration. We do not hesitate to refer the lesion of lung to that hypostatic pneumonia which so frequently occurs in typhus fever, and which is but an element of a general morbid state. The general symptoms that preceded the invasion of diphtheria—those manifested during its course, and which persisted after its disappearance, leave no doubt that in this disease there is something besides the local lesion."

We cannot avoid thinking that many of the cases of diphtheria we have lately read, terminating in exhaustion, have proved fatal by latent pneumonia. The form of accompanying fever so resembles the typhus with which we find latent pneumonia frequently associated, as at once to suggest the probability of such occasional termination.

Though we detail this case with the view of not omitting anything that may tend to throw light on a subject that much needs elucidation, still it must be observed that in consequence

of diphtheria, as a sporadic disease, not being very often met with, we must, in order to fully comprehend its nature, more fully study it in its epidemic form—that in which it presents itself most frequently, and affords the most favorable opportunities of our becoming acquainted with its characteristics.

During the years 1841, '42, '43 and '44, diphtheria prevailed as an epidemic in France, in the Department of the Saône and Loire, and La Nievre. The diphtheritic membrane was not confined to the mucous membrane, but extended to the cutaneous surface, yet in varying proportions. The pharyngeal form was the most frequent; next in order of frequency, the skin, the laryngo-tracheal and the buccal mucous membranes. These were instances of simple diphtheria confined to one situation. But in other cases, the pseudo-membranes formed simultaneously on many and distant points of the system; thus there were the pharyngo-cutaneous, the laryngo-cutaneous and the pharyngo-laryngeal diphtheria. In this epidemic the local seemed to precede the general symptoms: the face was much swollen; febrile reaction more or less intense; pulse in general very frequent, and almost always very hard and contracted; there was headache; the tongue was swollen and covered with a thick and yellowish coat; nausea and frequent vomiting; sometimes phlegmonous abscesses either in or around the conglobate glands. The disease reached its maximum of intensity in 36 to 48 hours. The tonsils became enormously enlarged, even becoming a mechanical obstacle to the passage of air or liquids. When the patients had been previously cachectic, the disease rapidly proceeded to a fatal termination, the pseudo-membranes having been brownish even from the commencement.

Most commonly, death from diphtheria took place from the seventh to the tenth day. When the disease was about to terminate favorably, the false membranes ceased to extend, became circumscribed by a red circle, assumed a swollen appearance, detached themselves in shreds accompanied by an oozing of blood, and were thrown off with a frothy fetid saliva. During this epidemic, the larynx and trachea were rarely affected by diphtheric inflammation. There were not many, therefore, affected with symptoms like croup; but as we have seen in

some sporadic cases, so in the epidemic form, both Daviot and Guersent tell of unfavorable terminations by broncho-pneumonia, generally double, stealing imperceptibly on when the patient was either convalescing or health nearly re-established. Daviot does not think pharyngeal diphtheria contagious—an opinion in which few will concur. He thought the objects which the physician in his treatment should keep in view, were the subduing of inflammation, the destruction of false membranes and the modifying the special morbid state of the mucous membrane. For the first, he recommends general bleeding, which he supposed particularly suitable for all beyond 10 years of age, where the disease is in its early stage and the general reaction violent. With this he advised local bleedings to be conjoined, to be repeated at short intervals. He restricts the use of vomits to very young subjects. He objects to purgatives, as augmenting the predisposition to intestinal irritation, and as being without any advantage. He also objects to blisters, as having the serious inconvenience of adding cutaneous to pharyngeal diphtherite; he however approves of rubefacients. Alum he thought useful in the early stage, but useless afterwards, when he preferred nitrate of silver to any other local application, even to muriatic acid. Calomel he looked on as useless in pharyngeal, but particularly serviceable in cutaneous diphtherite. He mentions the following important fact to show identity of nature in pellicular inflammation of mucous membrane and of the skin. During this epidemic he saw, under the influence of similar causes, diphtheria rage in several members of the same family, attacking in the one the pharynx, in another the skin, in another the respiratory passages, and in another all these at once or successively. How will those who maintain that croup is essentially a distinct disease meet this fact? Daviot's monograph is considered as one of the best on this subject. He lost two children by the epidemic. This circumstance is supposed to have ensured unusual care and exactness in his observations and statements, as his essay was written, most probably, from impressions, unfading as they were sad, which memory must have vividly recalled whilst recording symptoms so painfully associated with domestic affliction.

(TO BE CONTINUED).

SELECTIONS.

On the Procreation of Male or Female Children, at will. Presented by John E. Van Molle, A. M., of Brussels, to the Faculty of Oglethorpe College of Savannah, for admission to the grade of Doctor in Medicine.

(From the *Oglethorpe Medical and Surgical Journal*.)

In this essay, Dr. Molle gives us the results of some experiments instituted, in the first place, as he informs us, for the advancement of science, but which have become objects of speculation in the raising of horses and cattle. Men of science, we are told, having still further extended the enquiry, endeavour to apply this philosophical fancy to other flesh besides horse-flesh and that of cattle. The following are the facts which he assures us have been obtained :

1st. That the young obtained from a mare, cow or sheep, etc., when very young, was generally a male, when the male employed was of mature age, healthy and strong.

2nd. When the female is of mature age, strong, healthy and well fed, the young is more commonly female when the male employed is young, weak or exhausted by too often repeated copulation.

3rd. That the young obtained from the same when at mature age, strong, healthy and well fed, was in nearly equal proportion, when the male employed was in a similar condition.

4th. That the young brought forth, when the female is old, were generally males when the male employed is young and strong.

5th. That the young obtained from females, when in pride, being well fed and young, were generally females, when the male was not in pride, or when ill fed, or exhausted by frequent copulation, or too old.

6th. That the young obtained from the same, when ill fed and not in pride, were generally males, when the male was well fed, young, healthy, strong and in full heat.

7th. That if the female was exhausted by labor or forced exertion, the young would be generally male, should the male employed be kept in and well fed.

8th. That the young would be female, should the female be kept at rest and the male exhausted by labor or forced exertion.

9th. To conclude, that the offspring would more generally

be male or female, according to their respective physical and procreative abilities (age being taken into consideration).

From the preceding statements he derives the following deductions:

Man, being an animal, having physical and procreative faculties, analogous to those of the brutes, if a set of phenomena take place among these, the same must necessarily be produced in the human species, and if certain conditions of the physical body affect their offspring, the same physical conditions must affect the offspring in man.

Now, granting that the statements in regard to the brute creation be true, we deny that the principle involved can be extended to our species, modified as it is by civilization, and subject to so many and various influences. We therefore decline receiving these deductions, if they are based only on analogy. Is there nothing in civilization to modify the physical condition of man? Is Dr. Molle aware that some even go the length of supposing, the state of the *morale in coitu*, particularly that of the woman, has a determining influence on the organization of her offspring. Even if we do not maintain this position, to the full extent, still in the opinion of many, there is an air of probability about it sufficient to require that deductions practically ignoring and indirectly invalidating it, should be supported by an extensive collection of facts; yet when we come to examine the argument on this ground of evidence, we find but eight cases to sustain a principle, having for its whole support—a questionable analogy. Even the cases are incomplete and unsatisfactory. But Dr. Molle is not satisfied with merely establishing an analogy thus flattering between us and brutes—he favors us besides with some practical rules to guide us, when we shall have made up our minds whether we may choose to have male or female offspring. The thing is quite at our option. “We think,” he proceeds to state, “we are warranted in recommending the following rules as the means to get either male or female children at will:”

To get a male child, the husband should take good substantial and somewhat stimulating food, moderate exercise, pass his time pleasantly in the gay society of women, read lascivious

novels, refrain from sexual pleasures for a time previous to the procreative connections with his wife. During the same time, the wife should live sparingly, particularly on vegetables, fatigue herself every day, take some anti-aphrodisiacs and pass her time in the society of dry old women. To have female children, the opposite should be observed; the woman should live in the abundance of all good things, in the ball room, etc., but should refrain (restrain?) her passions and preserve their full force for the desired time—the male or husband, on the contrary, should reduce his physical abilities by actual labor, and at the same time, reduce his procreative propensities by frequent copious copulations.

We now learn that these two important events in man's history—his *advent* to life and union in the married state, can be best regulated, by submitting all that concerns them to the precepts of science,—that we should pair as the “beasts that perish”—that if we prefer a son to a daughter, or a daughter to a son, nothing can be more easily accomplished. We have but to follow the rules given in this essay, and the thing is done, as if by the magic wand of the enchanter, forgetting that the first of all authorities says—“It is He that hath made us, and not we ourselves.” We think this essay, on grounds both physical and moral, more suited to the state of Mormon society than ours. Utah is the place of all others, where this theory of development could be tested to advantage. The old sinners, who are elders there, with their numerous wives much younger than themselves, must, according to Dr. Van Molle's “speculation,” be especially blessed with female progeny—male infants, of course, must rarely be seen—the conditions for their forthcoming can scarcely exist. Thus we see how things there must be exactly dove-tailed—mutually corresponding to meet the peculiar requirements of Mormon society. Polygamy requires few males in comparison with females,—the males from exhaustion can have but few sons—hence a nice adaptation of the supply to the want. How fair and consecutive this process of reasoning appears, but unfortunately it is not founded on facts! We suspect Dr. Van Molle's theory is open to the same imputation,—it requires facts also, and until he supplies them, we will look upon his deductions as the

"baseless fabric of a vision." We are at all times willing to receive statements in connection with science, but we do object to receive suggestions falsely pretending to be based on such—suggestions that would lead us to overlook the high hopes and end of our being, and calculated to degrade and vitiate our nature.

On the Causes of Death after Amputation. By Mr. Bryant, Assistant Surgeon to Guy's Hospital. (*Proc. of the Roy. Med. and Chir. Soc., Feb. 22, 1859.*)

This paper is based upon an analysis of 300 cases of amputation, collected from the records of Guy's Hospital.

The author has divided them into four classes; and although he has not thought it necessary to alter the ordinary division of traumatic amputations into primary and secondary, he has made some change in the division of the other forms; for it became evident in the analysis, that the classing together of such cases as amputations for talipes, tumors, elephantiasis, deformity, and others of a like character, with those of diseases of the joints, a wrong result must ensue; and practically, this was found to be the case. He therefore divides these cases into pathological amputations and amputations of expediency, choosing the latter term as more accurately expressing the reason for the operation, as limbs are removed for tumor, talipes, elephantiasis and deformity more from expediency than necessity, and he therefore suggests the use of such term until a better be proposed.

General Conclusions upon the Causes of Death in Amputations generally.—1. That 25 per cent. are fatal; 30 per cent. of the lower extremity, 10 per cent. of the upper. 2. That pyæmia is the cause of death in 42 per cent. of the fatal cases, and 10 per cent. of the whole number amputated. 3. That exhaustion is the cause of death in 33 per cent. of the fatal cases, and in 8 per cent. of the whole number amputated. 4. That the following causes of death are fatal in the annexed proportions:

	Of Fatal Cases.	Of whole number.
Secondary hemorrhage, . . .	7 per cent.	or 1.66 per cent.
Thoracic complications, . . .	5.6 "	or 1.33 "
Cerebral,	3 "	or .66 "
Abdominal,	1.4 "	or .33 "
Renal,	3 "	or .66 "
Hectic,	3 "	or .66 "
Traumatic,	7 "	or 1.66 "

Pathological Amputations.—1. That pathological are by far the most successful amputations, 12.5 per cent. proving fatal. Such amputations of the upper extremity are generally followed by success. Of the lower extremity, 15 per cent. terminate fatally. 2. That pyæmia is the chief cause of death, proving fatal in 43 per cent. of the fatal cases and in 5.4 per cent. of all pathological amputations; and when fatal, as a rule, it causes death within fourteen days of the operation. 3. That exhaustion, either from the shock of the accident or of the operation, from hemorrhage, or all three causes combined, is the cause in 33 per cent. of the fatal cases, or 4 per cent. of all amputations. 4. That secondary hemorrhage is the fatal cause in only 9 per cent. of the fatal cases, and in 1.4 per cent. of all amputations.

Amputations of expediency.—1. That 30 per cent. are fatal; but as amputations of the upper extremity are, as a rule, successful, the percentage of this operation upon the lower is much increased, 40 per cent. proving fatal. 2. That pyæmia is the chief cause of death, proving fatal in 60 per cent. of the fatal cases, and in 18 per cent. of all such amputations; and when fatal, as a rule, death takes place within fourteen days of the operation. 3. That death from exhaustion occurs in but 10 per cent. of the fatal cases; and that some thoracic or renal complication, or carcinomatous infiltration, are fatal causes in the same proportion.

Primary Amputations.—1. That 43 per cent. are fatal; 60 per cent. of the lower extremity, and 30 per cent. of the upper. 2. That primary amputations are more successful than secondary. 3. That pyæmia is the cause of death in 43 per cent. of the fatal cases and in 16 per cent. of the whole number, and that, when fatal, the symptoms appear, as a rule, between the seventh and fourteenth days after the operation, and cause death in the third or fourth week, and not during the first two weeks, as in pathological amputations and those of expediency. 4. That exhaustion is the cause of death in 32 per cent. of the fatal cases, and in 12 per cent. of the whole number. 5. That traumatic complications prove fatal in 15 per cent. of the fatal cases, and secondary hemorrhage, cerebral or thoracic complications, about 7 per cent. each; renal disease proving a cause of death in 3.5 per cent.

Secondary Amputations.—1. That 50 per cent. are fatal; 68 of the lower extremity, and 12.5 per cent. of the upper. 2. That secondary amputations are more fatal than primary, by about 8 per cent. 3. That exhaustion is the chief cause of death, proving the cause in 60 per cent. of the fatal cases.

4. That pyæmia is the cause in 25 per cent. of the fatal cases; secondary hemorrhage and hectic in the remaining 15 per cent.

Conclusions upon Pyæmia as a Cause of Death.—1. That it is the cause of death in 42 per cent. of all fatal cases of amputations, and in 10 per cent. of all amputations. 2. That it is the cause of death in the different forms of amputation in the following order:—1. In 70 per cent. of all fatal amputations of expediency. 2. In 43 per cent. of all fatal primary amputations. 3. In 43 per cent. of all fatal pathological amputations. 4. In 25 per cent. of all fatal secondary amputations, and that, in amputations of expediency, it is the most frequent cause, and in secondary amputations, the least. 5. That in amputations for acute suppuration of the knee-joint, whether the result of an abscess discharging into the joint or otherwise, pyæmia is a more frequent cause of death, than in amputations for chronic disease. 6. That it is the general cause of death for talipes, elephantiasis and tumors. 7. That in primary amputations, and in amputations of expediency of the leg, it is a more frequent cause of death, than in the same operations upon the thigh. 8. That, upon the whole, pyæmia appears to be a more frequent cause of death in amputations through limbs the tissues of which are in a normal condition, and where a large surface of healthy bone is exposed. 9. That in pathological amputations, and in amputations of expediency, pyæmia, as a rule, proves fatal within fourteen days; but after traumatic operations, the period of death is about the twenty-fifth or twenty-sixth day.

General Conclusions upon Amputations of the Thigh.—1. That 27 per cent. are fatal. Pathological amputations, 18 per cent.; amputations of expediency, 31 per cent.; primary amputations, 60 per cent.; secondary, 75 per cent. 2. That in amputation of the thigh for chronic disease of the knee-joint, about 16 per cent. are fatal, or 1 case in 7. 3. That amputations of the thigh for acute suppuration in the joint are generally fatal, and that pyæmia is the chief cause of death in these cases. 4. That exhaustion and pyæmia are causes of death in equal proportions; or in about 40 per cent. of the fatal cases, and in 10 per cent. of all amputations of the thigh. 5. That exhaustion is most fatal in primary amputations, and the least so in amputations of expediency. 6. That pyæmia is most fatal in amputations of expediency, and the least so in primary. 7. That primary amputations are for the most part fatal from exhaustion; 35 per cent. of the cases sinking from this cause, 15 per cent. from pyæmia, and secondary hemorrhage and traumatic complications 5 per cent. each. 8. That exhaustion,

pyæmia and hectic are equally fatal causes in secondary amputations, proving fatal in 25 per cent. each.

Amputations of the Leg.—1. That 37 per cent. are fatal. Pathological amputations, 7.7 per cent.; amputations of expediency, 66.6 per cent.; primary amputations, 62.5 per cent.; secondary amputations, 66.6 per cent. 2. That amputations of the leg are 10 per cent. more fatal than of the thigh; the amputations of expediency and traumatic amputations being more fatal, and the latter more frequent. 3. That amputations of expediency of the leg are generally fatal—being twice as fatal as those of the thigh: that pyæmia is the chief cause of death in 75 per cent. of the fatal cases, and in 50 per cent. of all such amputations. 4. That in primary amputations pyæmia is the death in half the fatal cases, or in 32 per cent. of all such operations; exhaustion and visceral complications about 8 per cent. each. 5. That comparing primary amputations of the thigh and leg together they are equally fatal, but that pyæmia is twice as fatal in amputations of the leg as in amputations of the thigh. 6. That half the cases of secondary amputations die from exhaustion; pyæmia and secondary hemorrhage being fatal in 8 per cent. each. 7. That taking all amputations of the leg together, 42 per cent. of the fatal cases die from pyæmia and 32 per cent. from exhaustion.

Amputations of the Upper Extremity.—1. That 10 per cent. are fatal. 2. That pathological and those of expediency are, as a rule, successful. 3. That about 20 per cent. of traumatic amputations are fatal; 22 per cent. of the arm and 16 per cent. of the forearm. 4. That one-third of these fatal cases die from pyæmia, one-third from some traumatic complication, and the remaining third from secondary hemorrhage or visceral disease. —*Ranking's Abstract.*

Cursory Remarks on the Diagnosis of Fatty Heart. By Henry Kennedy, A.B., M.B., Fellow and Censor of the College of Physicians in Ireland, Physician Extraordinary to Sir P. Dun's Hospital. (Read before the Medical Association, June 1, 1859.)

(From the *North American Medico-Chir. Review*.)

The knowledge of morbid anatomy has increased much within the last twenty-five years; nor must we forget that Dublin has the credit of taking the first step in this great move, by the establishment of the Pathological Society; and a student can now, by very little trouble, attain a knowledge of morbid

structure which would have been utterly impossible for even the oldest to acquire a few years since. Of the various paths to which the study of diseased structure has led, none has been more striking than the one known under the name of fatty degeneration; and very few are the parts of the frame in which this change has not been detected. It is not my intention here to speak of this subject generally. One remark, and only one of a general character, would I make; and this is, that the change known as fatty must be looked on in a different point of view from any other degeneration with which we are familiar. Neither malignant, strumous, nor other changes are to be found in the frame which is healthy. But fat is ever, and must ever be, a constituent part of it. Hence, when its presence amounts to disease, it is only an exaggeration of a healthy condition, if I may so speak. Hence, also,—and this is a deduction which it may be of much greater consequence to keep in mind,—the powers of art may fairly be looked on as more capable of grappling with this change than with others: of which more again.

I have said it is not my object to speak of fatty change generally. My present wish is to direct attention to a few points connected with this change when it affects the heart, and, more particularly, the diagnosis of this state. It will, I think, be admitted that this point is one of grave importance not only to the physician, but also the surgeon. You must be now well aware that all, or very nearly all, the cases of sudden death under the use of chloroform, have taken place in persons affected with fatty hearts. This fact alone would invest the subject with consequence; to say nothing of the interest it presents to the physician. It is, in fact, a common ground for both, and well worthy their deepest attention.

It is necessary to begin these remarks by avowing the great difficulty which surrounds the diagnosis of fatty heart. Of the common affections of the organ—and this change may fairly be classed among these—there is none which presents more; and though on a former occasion I have directed attention to this point, it is essential to do so, but very briefly, again. I believe here, as with other diseases difficult of diagnosis, that the very first step in advance consists in our getting a clear idea of the difficulties which must be surmounted. Why, then, are there difficulties in this particular affection, more than in others of the same organ? One of the reasons was given by myself so far back as the year 1849; and I would now state my impression that the fact is one of moment, as bearing directly on the point under discussion. In the course of some investigations made in that year, I was led to observe that fatty disease of the heart

and disease of the valves are not usually found together. This was, at first, an impression; but as this may be erroneous, I set about collecting data on which to found solid conclusions, and in a short time had collected some 53 cases. Of these, I found the valves were healthy in 43, which left 10 only of an opposite character. Here, then, was a fact of some consequence; and which I have taken every opportunity of testing since, and with no other result than still further confirming the point. I have noted 152 additional cases, so that the entire now amounts to 205;* and of these the valves were diseased in only 30. These numbers, I think, speak for themselves, and appear to myself to prove that valvular disease and fatty heart are rarely co-existent. The character of disease of the valves too, even when it does exist, is worth nothing; for it is very generally, though not invariably, of the thickened leathery kind: in fact, it is fatty disease of the valves, as contradistinguished from what is called ossific deposit. And this fact, again, has an important bearing on the progress of these cases, though I am not aware it has been noticed at all; for even though the valves be thickened, they may still be quite competent to perform their functions, at least so well that the life of the patient will not be shortened. In such, a souffle may be present, and persist for years and years without change, its character all through being very soft, and in some I have seen, hard to catch. The character of the souffle then has, when present, an important bearing on the case.

But before saying more on this point, I would notice a second, and, as it appears to me, a most important reason, why the diagnosis of fatty heart is often so very obscure. I allude to the fact that this change may be, and often is, partial. Of the fact you are all aware, and know that a very small portion of the left ventricle may be quite degenerated, the remainder being comparatively sound; and that, when rupture occurs, it is much more commonly in the walls of this cavity, and in a spot where they are both degenerated and thinned. Now, from this point it follows that five-sixths of the ventricle may be quite fitted to carry on its functions, and yet the other sixth be in a state which renders it liable to give way, so causing instant death; and all this without any physical sign which would be available during the lifetime of the patient. Important as this consideration is, however, it is not in connection with partial degeneration of one

* In tabulating these cases, I found it impossible to separate those which have been properly called true fatty degeneration from the others. I believe, however, that when fat exists in unusual quantity on the heart, it is rare to find the muscular structure beneath perfectly healthy.

cavity to which I wish now to direct your attention, but to the same state when it affects one side of the organ differently from the other; that is, when the left heart is more degenerated than the right, or *vice versa*. That this state occurs is perfectly well known; but it may be questioned whether the deductions which arise directly from it have received that attention, if any, which they appear to me to merit. Indeed, I am not aware of any author who has dwelt on this special subject at all. As illustrating what I mean, attention may be directed to the fifty fatal cases, under the use of chloroform, detailed in the able work of the late Dr. Snow. Any one who has read these cases may recollect how pointedly it is stated, I believe in every one of them, that the pulse at the wrist was closely watched, and, in almost all, continued to beat steadily till the very instant of death. Now it is not to be denied that watching the pulse is essential in such cases. But it is fully as essential to recollect that the healthy beat of a radial pulse may not be, and often is not, a guide to the state of the right heart. Hence the latter may have its action fatally stopped, by such an agent as chloroform, at the very moment when the left ventricle is carrying on its functions, to all appearance, healthily. And the examination of all the fatal cases seems to lead to the same conclusion; for it will be recollected that fluid blood and greatly distended right cavities were found in very nearly every fatal case. In point of fact, we have no pulse to guide us as regards the right heart; and hence a most important assistance is wanting to aid our diagnosis. In following out this part of my subject, I have been able to collect only a comparatively few cases; for attention not having hitherto been directed to the point, by far the greater number of those who have detailed cases of fatty heart have drawn no distinction between the cases, as to whether the disease was farther advanced on the one side or the other, or both. As it is, Quain gives 22 instances where the point is explicitly stated. Of these, the left ventricle was most affected in 8 cases, and the right in 4. In the remainder, the disease was equally divided. But I would not lay any great stress on these numbers; for they are too few to draw safe conclusions from. Two points, however, they show clearly: that either side of the heart may be seriously damaged while the other is comparatively healthy; and, secondly, that the disease to which the right heart is by far the most liable is that of fatty change: I mean as contrasted with valvular disease.

For so far, then, your attention has been mainly drawn to two points: first, that fatty degeneration and valvular disease rarely coexist; and, secondly, that the fatty change may be in

great part limited to one or other side of the heart. But facts like these are useless, unless they lead to some practical results. Let me, then, draw some conclusions which appear to myself to follow directly from them.

Dr. Stokes, in his last able work, speaking of the diagnosis of fatty heart, lays down the following proposition: "That although this affection may exist without valvular disease, yet the coexistence of a certain amount of alteration of the aortic valves is common; so that the combination of a slow pulse, a feeble impulse, and a diminished first sound over the left ventricle, attended with a single murmur, while the second sound remains clear, will be sufficient for the diagnosis of the disease in many cases." Now, I believe this proposition to be correct as far as it applies; and it is certainly interesting to observe that it bears out curiously, by examinations on the living, the state of morbid parts, to which your attention has been directed this evening. For you will recollect it was stated that when valvular disease exists with fatty heart, the valves were what might be called leathery; that is, a state which might give rise to a murmur with the first sound, and yet leave the second healthy; and my own examinations on the dead body showed me that the valves, in this state, were quite competent to prevent all regurgitation, and thus give a healthy second sound. The proposition, I have said, was correct as far as it applies; but after the numbers given this evening, it is obvious it must be taken as proving the exceptional case. For they show, to my own mind indisputably, that fatty heart is much more commonly found existing by itself than with valvular disease. My first paper on the subject appeared five years before Dr. Stokes's work, and I take it for granted must have escaped his notice; otherwise I think his views would have been modified by it.

In connection with this thickened state of the valves, as contrasted with ossific deposit, there is another point worthy of notice. It has been long usual to connect visible pulsations of the arteries with open aortic valves. I satisfied myself, many years back, that this statement must be received with exceptions. In other words, you may have visible bounding of the arteries, where the valves of the aorta are not open, and where they prevent any regurgitation; and it is, as far as I am aware, when the valves are partially thickened that this state of things is to be observed. In such cases you may have a single first sound, as observed by Dr. Stokes; but in addition you may have—for it is not constant—visible pulsation of the arteries. And it need scarcely be observed that this bears, in the most

direct way, on our prognosis; for this pulsation is not of the serious character of the disease described so well by Dr. Corrigan, and, I know from observation, does not affect the patient's life in the same way, and may go on unchanged for years. This thickened, and, as I believe it may be called, fatty state of the aortic valves, it is then essential to distinguish from any other diseased state of the same parts. It does not, I repeat, affect life in the same way as other valvular disease; is found chiefly in connection with fatty change in the texture of the heart itself; gives rise, in some instances, to visible bounding of the arteries, but at the same time not allowing of regurgitation; and, if to Dr. Stokes's observations my own be added, may, I believe, be diagnosed during life.

We now pass on to a consideration of those cases of fatty heart where no valvular disease exists; and here it is, in truth, that the diagnosis of fatty heart really commences; in other words, in a considerable majority of cases, no morbid sound exists by which our attention might be directed to the organ. If there be a morbid sound of any kind, it must lead to further investigation. But in its absence matters become very different. Hence we must start with the definite idea, that the great probability is, no morbid sound will be present to assist us. But, before going further, I would call attention for a moment to one or two points, which, in an inquiry of this kind, may not be out of place.

In the first place, I would notice the very peculiar arrangement of the muscular structure of the organ. A boiled heart is an excellent way of showing the very extraordinary way in which the muscles are interlaced with each other, and yet at the same time so disposed of in layers one over the other, that they might be described as being separate. To this state of parts we must add the peculiar arterial supply; for the coronary arteries barely, if at all, inosculate. In the large nervous supply, too, we must not overlook the close connection of the heart with the system by means of the eighth pair, at the same time that it receives a large supply from the sympathetic, and has, so to say, a special supply within itself, in the existence of ganglions found in its substance, and discovered, I believe, by Lee. In the last place may be noticed the way in which fatty disease exhibits itself in this organ. It is often, as all are aware, in spots which may be wonderfully isolated, being surrounded by healthy structure; or, it may be in layers, giving a striated appearance to a section of the walls of the particular cavity affected; or, should the entire thickness of the part be attacked, it is then usual for the inner surface to be the most

diseased; or, with the muscular structure healthy, fat may be deposited on the surface of the organ in such quantity as to impede its action, and so constitute disease.

Keeping now these facts, both of the healthy and morbid heart, in view, on what, then, is the diagnosis of the disease to be founded? And it is to be remembered that you have no abnormal sound to assist you. Attention must be caught if there be any unusual murmur. But the existence of murmur is the exceptional case. After a good deal of attention to the subject, I really see no means of making a diagnosis, except, after the French method, by way of exclusion; and it even is not all that can be desired. I am well aware that writers give several physical signs as diagnostic, such as a weak beat at the heart or of the pulse, or muffled, distant or weak sounds. But I have the strongest conviction on my mind that, in so doing, they have not made allowance for what obtains in health. They have argued as if the impulse, sounds, and pulse were, so to say, fixed quantities; which I believe to be an error. For I have satisfied myself—as others, I think, must have done—that, within certain limits, and in a state of perfect health, both the sounds and the impulse of the heart vary very considerably; and so it is that you may have a strong or a weak pulse or impulse, and a great variety in the intensity of the sounds of the heart; and all these, I repeat, within the circle of health. The very same remarks, too, apply to the respiration, as I am sure all present must have observed. If, indeed, we see a case where, after the sounds have been natural, they then become muffled or weak, such would be a source of diagnosis. But every one is aware that cases do not come under notice, and that our opinion must very usually be formed from one or two observations. Should the disease be in the very advanced stage, then also, from the extreme feebleness of the sounds and impulse, assistance is afforded us. But at this period there are other signs which clearly show the state of the organ; and I would speak of an earlier stage, when it is really of much greater moment to make out the disease.

For the reasons just given, I would then say that in the comparatively early stage of fatty heart, we must look with great caution to either impulse or sounds to assist the diagnosis, unless in the exceptional case of which I have spoken. There is a physical sign, however, which, though not always present, may give us valuable assistance. Nor do I find that any writer has noticed it in connection with the diagnosis. I speak of enlargement of the heart where there is also fatty degeneration, and this without valvular disease. In Quain's valuable tables,

which I take as independent observations, and so going to confirm my own, out of 83 more than half presented this state. Hence I cannot but conclude that enlarged heart forms an important element in what may be called the natural history of the affection; and I do not find that, in this point of view, it has been noticed by any recent writer. Fatty change is, in truth, by far the most frequent cause of enlargement of the organ, where there exists at the same time no valvular disease. For every one must be aware that hypertrophy *per se*—the heart's texture remaining sound—is very rarely met with. Hence, if we have an enlarged heart and healthy valves, the strong presumption is that the organ is fatty. But even with a previous knowledge of this fact, I am ready to admit that enlargement, even to double the average size, is not by any means so easily made out as might *a priori* be supposed. In the great majority of the cases, there is more fat than natural under the skin; and nothing is more common than to find it in quantity in the anterior mediastinum, to say nothing of the varieties to be met naturally as regards the relative position of the lung and heart. Still the difficulties may, I know, be often overcome by an accurate examination; and I would specially mention the plan of using percussion in varied positions of the body. But some one may ask here, is not this enlargement of the organ just as likely to be overlooked as any other physical sign connected with the disease? My answer is in the negative; and for this reason, that the pulse at the wrist leads us to look for it. You are all aware that on this last sign much has been written as diagnostic of fatty heart. I must here state my conviction, that it has been the exceptional cases which have been commonly described as marking the disease; such as slow, unequal, intermitting, or very rapid pulse. Now, I do not deny that these occur in cases of fatty heart. I have met examples of all of them. But what I do say is this: that the pulse most usually met is natural as to frequency; at the same time that it is fuller, passing sedately, as it were, under the finger, and giving the idea of being diffuent. It is, in truth—contrary to what is usually taught—the pulse of hypertrophy, but not attended with the same strength; and Hunter's expression might almost be applied to it, as being “action without power.” Now, you will observe that such a pulse is exactly in keeping with the state of the heart which has been just described; it is what we would expect; and whatever doubts may arise about the most common character of pulse, there can be none, it may be stated, as to the frequency with which enlargement of the

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heart occurs in fatty degeneration, being fully one-half the cases detailed. I stop not to inquire the precise cause of the hypertrophy, but only to state the fact, and my own experience about it.*

Of the other kinds of pulse met in these cases I have little to say. Next in frequency to what has been described I would place inequality of the beats, not intermission. Some writers, I observe, speaking of this sign, seem at a loss to account for it, in the absence of valvular disease. To myself a fair explanation is afforded in the peculiar anatomy of the organ, glanced at this evening, taken in connection with the fact that fatty disease exhibits itself in spots, patches, or layers; a state of parts which may, without any straining, be expected to give rise to unequal action of the organ, and, consequently, unequal pulse: and, indeed, I may say that I have seen cases where a kind of double beat at the heart was attended by but a single one at the wrist.

Of the several symptoms in connection with fatty heart, and referred to the head, chest, or abdomen, it is not my intention here to speak. I would refer to the several writers on the subject; but more particularly to the able work of Dr. Stokes, which, as far as I am aware, contains the best *resume* of the matter. There are just two symptoms which appear to me to call for a moment's notice. The first is the dyspnoea, which, you are all aware, constitutes such a striking feature of the disease, especially in the middle and latter stages. Now, it is not the symptom itself to which I would direct attention, but the disproportion which almost constantly exists between the complaint of the patient and the labor of the respiration as evidenced to our eyes. In the history of the complaint, I am really not aware of any other single symptom more striking than this. The patients tell you that their great suffering is from dyspnoea, that they cannot make the slightest exertion; and yet, when you look at them, you see little or no corresponding movement of the chest. The contrast between this state and where there exists valvular disease, as, for instance, of the left auriculo-ventricular opening, is truly striking. Nor does this state exist only where there is fatty heart. It will be observed where the patient, in addition, gets an attack of bron-

* It has yet to be determined whether slow pulse occurs in any particular form of fatty heart. That it is by far the exceptional case, I have no doubt; and were I to venture to connect it with any one state of the organ, it would be that in which, without any enlargement, there existed true degeneration of the heart's texture; the patients being anything but fat. In most of such cases the effects of wine are truly remarkable.

chitis, very slight to all appearance, and yet a most fatal affection; and I have reasons for knowing that grave errors in prognosis have arisen in these cases, as, I believe, from the very cause to which I allude; that is, the respiration looks so quiet as to throw the medical man off his guard. It was gradually that I arrived at what appear to be fair reasons for this state of things. In the first place, the cartilages of the ribs are very generally more or less ossified; in the second, the intercostal muscles are very apt to be either covered with fat or degenerated; and, in the last place, the heart itself, while seriously altered in its texture, does not present any impediments, in the shape of valvular disease, to the current of the blood; and thus it is, with a disease of slow progress, as we must suppose fatty degeneration to be, that the system gets gradually accustomed to the change, and to a degree which it is impossible for it to do when there exists a direct obstacle to the circulation. It has further appeared to me that this want of proportion—as it may be well called—between the patient's sufferings and the physical exertion to relieve them, is particularly to be observed when the right heart is the furthest advanced in disease; and bearing out this, I have seen cases where the pulse at the wrist was steady and equal, not beating more than 86 in the minute, and this going on to the very last moment of existence. At any rate, whatever the explanation be, the fact itself has repeatedly come under my notice, and appears to me one well worthy of attention.

In the last place, I would notice a general sign which I think of consequence to look for, even though not always present. I mean a failure in the animal heat. It has been noticed casually by some writers. I would be inclined to give it much greater prominence. In some cases I have seen it was very striking; and it is worthy of note, as not being confined to the extremities alone. The patients have complained of it in the sides, and back, and stomach. Any complaint of this sort should ever, I believe, catch our attention.

It was my intention to have said something on the treatment; but my present limits forbid. I shall, therefore, only observe, that I was glad to find the possibility of a cure in the early stage of fatty heart, which was strongly advanced by myself ten years ago, and since then been supported by Dr. Stokes, in opposition to the views of Quain and others. But I can only here remark, that if we should attempt the cure, we would not have, in the majority of cases, any valvular disease to contend with.

In concluding these remarks, which it must be recollected are

strictly cursory, it may be well to throw into a series of propositions the chief points brought forward.

1. That fatty change in the heart is rarely attended with valvular disease.

2. That, with our present knowledge, the proportion seems to be as six to one.

3. That when valvular disease exists with fatty heart, it is commonly the aortic valves that are affected, and these are thickened and fatty.

4. That this state of the valves rarely allows of regurgitations.

5. That it may give rise to a soft souffle with the first sound of the heart, leaving the second healthy, as observed by Dr. Stokes.

6. That there are grounds for supposing that this fatty state of the aortic valves may go on for years, without affecting the duration of life.

7. That visible pulsation of the arteries often attends this state; but as there is no regurgitation, it so differs from the disease described by Dr. Corrigan.

8. That enlargement occurs in more than half the cases of fatty heart.

9. That, in keeping with this, a large diffuent pulse is the most common kind to meet in fatty heart.

10. That either a very slow, unequal, or rapid pulse is only met in exceptional cases.

11. That the French way of exclusion is, in the absence of valvular disease, the chief way of arriving at the diagnosis of fatty heart.

12. That there is often a marked disproportion between the complaints of the patient of dyspnoea, and the physical efforts made to relieve it.

13. That this is possibly most marked when the right heart is the furthest advanced in disease.

14. That a marked diminution of the animal heat, which may, too, be confined to unusual parts of the body, is often met in connection with fatty degeneration.

15. That fatty degeneration of the right heart is the disease which most frequently affects that portion of the organ.—(*Edinburgh Medical Journal*, July, 1859.)

Late Researches on the Atmosphere.

(From the *New Orleans Medical and Surgical Journal*.)

The activity of chemistry, in its examinations of the accidental and essential constituents of the atmosphere, has been very great during the past year. We propose throwing together some gleanings from French and English journals on the subject, that will be of interest in a hygienic point of view.

Iodine in the Atmosphere.—Bouis has detected iodine in the rain-water of Paris during the months of April, May, June, July and August. Since it is the opinion of some medical men that the iodine contained in the air is not without some influence on public health, Bouis considered it a matter of importance to determine in what condition it existed in the atmosphere. The solution of this question is a very complicated matter, and he has made many fruitless experiments; but the results are so interesting that they are worth publication.

Being of the opinion, advanced by Chatin, that iodine is in a free state in the air, he endeavored to detect this substance, in the first products, in the distillation of rain-water; but he discovered that it remained in the residuum of the distillation, and, as rain-water always contains ammonia, he supposed that the iodine would be found in it as iodide of ammonia—a compound only slightly volatile. But the use of perchloride of iron showed that the iodine, in a large number of cases, was associated with organic substances that concealed its presence. If rain-water contained iodine in a free state, distillation alone would eliminate it; or if the iodine was in the condition of an iodide, the addition of perchloride of iron would make its elimination easy—but this is rarely the case.

In treating rain-water with perchloride of iron very slightly acid, brownish flakes are formed, resembling crenate of iron, in which case iodine cannot be determined in the products of the distillation; but if, after such treatment, the ochreous deposit be calcined, in the presence of carbonate of iron, the organic matter is destroyed, and then it is an easy matter to detect the iodine.

Bouis concludes that iodine is found in rain-water, sometimes in the condition of iodide of ammonium, but most frequently in combination with organic substances.

Atmospheric Ozone.—Dr. Moffat read a paper on the subject, at the meeting of the London Meteorological Society. He stated that a slip of paper moistened with iodide of potassium and starch becomes brown after exposure to the air, but after a longer exposure it lost this color; that if suspended over a cess-

pool the brown discoloration would not be produced, and if a brown slip were suspended over a cesspool it would also lose this color. "In these results," the author observes, "there are proofs of three distinct agents: one, ozone, which decomposes the iodide of potassium; the iodide being set free, produces the brown color. The second, sulphuretted hydrogen, the hydrogen of which removes the brown color by combining with the iodine, and forming hydriodic acid. The third, incompletely oxidized substances, the products of decomposition of animal and vegetable matter, which are more easily oxidable than the oxide of potassium." "As the products of putrefaction and combustion are found at the earth's surface," Dr. Moffat concludes that "the quantity of iodine must be greatest in the lowest strata of the air, and that consequently the quantity of ozone must *there* be at its minimum." He also states that where the air is stagnant ozone is at its minimum; and that as the north current is the lower stratum of air in motion, it is the minimum ozonic current, while the south current, being the higher air in motion, is the maximum.

The north current is the "death current," the south that of "sporadic diseases." The deadly effects of a calm are attributed to a concentration of the products of the decomposition of animal and vegetable substances, which substances are made innocuous by ozone, since it oxidizes them. In calms, fevers and cholera prevail, and the type depends on the degree of concentration of poison. Dr. Moffat has seen "an epidemic commencing with scarlatina run into typhus, and terminate in a disease of choleraic type, rapidly decline after cleansing and draining. We have no power over the winds, but he believes that if a south or ozoniferous current could be directed into 'fever nests,' or into cholera localities, these diseases would vanish; and in proof of the correctness of this opinion, mentions that cholera declined at Newcastle in 1853, and in London in 1854, after the setting in of the ozoniferous current."

Mr. H. S. Eaton read a paper at the same meeting of the Meteorological Society, showing, from tables, that "ozone was prevalent to the largest extent when the direction of the wind was between the south and west points of the compass, and when the amounts of rain and cloud were greatest; and that the least amount of ozone was coincident with winds having a northerly and easterly direction, and with the least amount of cloud and rain." These results, it will be observed, agree, in the main, with those of Dr. Moffat.

Measurement of the Variable Intensity of Ozone.—Dr. Lankester has devised an instrument for this purpose, composed of

two cylinders, contained in a box, on which is wound a band of prepared paper. The arrangement is set in motion by ordinary clock-work. As the band leaves the one cylinder it is wound up by the other, and the arrangement is so managed that but a small portion of the paper is exposed at any time to the action of the air. The whole band is divided into twenty-four parts, corresponding with the hours of the day. The quantity of ozone which the atmosphere contains at different periods of the day is thus indicated by the different coloration of the divisions.—L. H. S. (*Am. Med. Monthly.*)

CLINICAL RECORDS.

(From the *London Lancet.*)

Tonics and Iron in Erysipelas of the Face and Scalp.—We very frequently see the value of the treatment of erysipelas of the scalp and face by the exhibition of the muriated tincture of iron conjoined with tonics, and dusting the inflamed skin with flour, not neglecting proper attention to the chylopoietic viscera. We might refer to several recent instances in which the efficacy of iron has been marked, but shall content ourselves with noticing that of a woman in Guy's Hospital under the care of Dr. Wilks. She is fifty-seven years of age, and was admitted on the 6th inst., but the erysipelatos inflammation had set in a few days before that period, and extended all over the face and the scalp. Its intensity was not so great as to cause closure of the eyes, nor were the features altogether obliterated. The scalp was remarkably swollen, puffy, and extremely tender. When placed in bed, on her admission, the inflammation had apparently subsided, and evidences of desquamation were already manifest. Nevertheless, she was in a precarious condition, being very weak and low, and evidently requiring generous and supporting treatment. Twenty minims of the muriated tincture of iron were ordered every four hours, with eight ounces of wine, porter, and light nourishment. She now began to improve, and when we last saw her (on the 12th instant) she was sitting up in bed, with still some disfigurement of the features, and puffiness and usual tenderness of the scalp. Her improvement was uninterruptedly steady under the use of the steel, and she is making a good recovery. We have seen cases thus treated from the beginning with equal advantage.

Excision of the Knee-Joint for Old Standing Disease.—On the 7th instant we were present, at the Great Northern Hospital, when the knee-joint of a man, twenty-six years of age,

was removed by Mr. Price. It was one of those cases of disease which he believes to be well adapted for the operation. It was surmised that the mischief was confined to the synovial membrane and the cartilages of articulation. On opening the joint purulent fluid escaped. The ends of the articulating bones were found in the condition expected: the synovial tissue had almost disappeared; the cartilages were entirely removed, except a few spots; while the exposed bone was healthy in appearance, vascular, but not ulcerated to any great extent. The patella was deprived of its cartilage, and was removed. We noticed that the operator, in opening the articulation, first reflected only on the skin and sufficient of its cellular connections, so that the infiltrated fat and loose tissues which generally abound about the joint when it has been long diseased, formed no part of the flap. Should any unhealthy inflammatory action set in, this altered structure is liable to slough and greatly complicate the treatment of the wound. The hæmorrhage was more copious than usual, the soft parts and periosteum being extra vascular. The limb was adjusted in a manner recommended by the operator, and up to the present time, the patient has expressed himself greatly benefited by the operation, his appetite and sleep having returned.

Disease of the Sternum simulating Aneurism.—The following case is one of great interest, and is still under treatment at the Hospital for Consumption, Brompton, under the care of Dr. Edward Smith.

An athletic man, aged thirty-two, engaged in a gunpowder factory, had felt palpitation of the heart, after moderate exertion, for twenty years. Fourteen years ago he had rheumatic fever during six weeks. He has at various times been much alarmed by explosions. He has been accustomed to make great muscular efforts, particularly in turning a crank or a mill, in which he had to use great effort in dragging toward himself. Whilst engaged in this violent labor about sixteen months ago he felt a sudden giving-way within the chest, and soon afterwards first perceived a bulging at the middle of the sternum.

July 7th, 1858. There is now a bony projection, beginning about two inches from the top of the sternum, extending downwards four inches, and transversely three inches, having its highest part opposite the third rib. There is no tenderness on pressure, but the surface is red and covered with hair. He has scarcely any internal pain, but there is a sense of stretching about the sternum, and at night he feels a little throbbing chiefly on the left side. There is no purr, nor any pulsation perceptible to the touch. There is a musical blowing with the

second sound over and to the left of the sternum, and a non-musical and soft murmur about the apex of the heart. The bruit is not loud anywhere, but it extends to the top of the sternum and to a wide extent below. There is a rough systolic and a feeble diastolic bruit at the apex, and there is pulsation ardent and natural at the apex of the heart and its vicinity. The pulse is 76, full, even, and regular in both wrists when sitting, and the respirations are 23 per minute. No unusual pulsation in the carotid or subclavian arteries, nor any turgidity of the veins.

The case was thus obscure, but it wore a serious aspect, and a fear was entertained less it should be proved to be one of aneurism of the ascending aorta.

Sept. 1st. Again examined, and presents the same symptoms.

15th. He has had a little pain in the right breast, and a sense of pressure on each side of the chest when lying down.

Oct. 6th. There is more pain, and it is of a darting character; the tumor is a little larger; there is no dysphagia; his appetite is not good; and a careful examination of the lungs shows that there is lessened vesicular action. There is still a blowing diastolic sound, and it is sharper on the right of the sternum; arterial pulsation still regular. He is beginning to stoop somewhat, and there is insufficient respiration.

20th. He has suffered somewhat more pain at night, but pain has never been a prominent symptom. There is now fluctuation perceptible at the lower part of the tumor and in the space on the left of the sternum, but there is no thrill nor pulsation there. He has experienced one or two attacks of shivering.

At this period the case became less obscure, for it was almost certain that the pulsation was due to the presence of a little fluid in the anterior mediastinum. The case was now examined by a number of Dr. Smith's medical friends, and the general opinion arrived at was, that it was not a case of aneurism.

Nov. 3. Still in the same state.

11th. Dr. Smith showed the case to Mr. Fergusson, the consulting surgeon to the hospital, who regarded it as one of disease of the bones of the sternum. The patient would not permit an exploring needle to be used, as his club surgeon had informed him that he was suffering from an aneurism.

24th. No change.

27th. A small bladder of the size of half a hazel-nut has formed where the fluctuation was perceptible, but no discharge has taken place.

Dec. 8th. The health has improved, and the bladder is a little shrunken at the top.

21st. On the 18th there was a very small quantity of clear fluid discharged, which formed a small crust; and the bladder is a little shrunken.

Jan. 5th, 1859. The bladder is slightly enlarged, but there is no change in the condition of the tumor.

May 20th. Still in the same state, and able to do light work.

This case is very interesting from its obscurity in its earlier stages, and shows well how guarded the practitioner should be in forming an opinion as to the nature of such diseases, and more particularly in expressing any opinion to the patient. Its march has been very slow, and unmarked by any prominent symptom, and seems to be very much independent of any control on the part of the physician or surgeon. Dr. Smith's aim in treatment was to prevent local irritation and to maintain and improve the general health, but particularly to remove the habit of feeble respiration and to cause the diminution of the vesicular murmur, which constitutes the first stage of phthisis, and tends so frequently to the deposition of tubercle. This has been in great part effected.

Tobacco-Pipe Stem in the Throat.—The recent wound of the throat by a tobacco pipe, in which the carotid artery was tied by Mr. Ure, at St. Mary's Hospital, will be in the recollection of our readers. The ligature came away on the eighteenth day, and the poor man was progressing very favorably, but with the inconvenience of almost complete closure of the mouth, which had remained since the day of the accident. He was put upon a grain of sulphate of iron three times a day, with evident advantage. On the 22nd of June, he felt something in his mouth, and on introducing his two fingers withdrew the stem of the tobacco-pipe from beneath the left side of the tongue, where it had remained unsuspected and unobserved for several weeks. It measured two inches and three-quarters in length. The removal of this body permitted the mouth to open wider, and the rigidity of the muscles of the jaw to relax. No bad consequences have ensued, and as we had already predicted, a good recovery has taken place.

Encephaloid Disease of the Epididymis.—A lad sixteen years of age was admitted, on the 22nd ult., into University College Hospital, with encephaloid disease of his left testicle, which had grown within seven months to the size of a cocoa-nut. By the end of the next few days, it had increased nearly three inches, so no time was to be lost in its removal, which was performed by Mr. Erichsen on the 27th. The anterior part of

the scrotum was red; the tumor was soft in front, but indurated posteriorly; and although the disease was extensive, the spermatic cord was unaffected. A section of the tumor showed the body of the testicle to be quite healthy, situated in the centre of the diseased mass which had originated in the epididymis. The wound was attacked with erysipelas the next day, which is prevalent just now, and temporarily retarded the healing action, but the boy is otherwise doing well.

We were present at the Middlesex Hospital on the 25th of May, when the right testicle was removed from an elderly man for the same disease. It originated in a blow ten months before, and had latterly much increased in size, until it was as large as a foetal head. For three months after the blow no great inconvenience was experienced. From the general appearance of the man, there was no doubt that he had serious internal organic disease, which would endanger his life at a later period. He has recovered from the effects of the operation. A section of the tumor showed it to be the well-known form of the disease, with the development of several small cysts. Metallic sutures were used to bring the edges of the wound together.

Nasal Carcinoma.—We were lately shown a patient under Mr. Coulson's care at St. Mary's Hospital, who had a carcinomatous tumor in rather an unusual situation. It occupied the left side of the nose, was oval in shape, of the size of an almond, and was partly hollowed out by ulceration. He was admitted on the 24th of June, and stated that the disease commenced about a year ago, in the form of a small pimple over the left nasal bone, which slowly increased in size, became inflamed, and then ulcerated. Various caustics were employed—amongst others, strong nitric acid—for destroying the surface, followed by the application of the concentrated chloride of zinc. It is quite possible, with perseverance and attention on the house surgeon or dresser of the patient, in applying the caustics, that the ulcer may be got to heal. When we last saw it, it had an angry and irritable look, which had been somewhat increased during the prevalence of the great heat of the last few days.

Useful Plan of Supporting Stumps after Amputation.—At Guy's Hospital, for the last two years, Mr. Hilton has been in the habit of supporting the stumps of amputated thighs in a manner which is worthy of notice, from its cleanliness and convenience, together with the comfort accruing to the patient. It consists in applying a short and broad splint under the stump, which is elevated at an angle of forty degrees; beneath the

splint is a small cushion, and a light bandage is applied over all. This permits of examination and dressing without the slightest disturbance to the patient, the stump always looks clean and healthy. The cases in which it is at the present moment employed are the following:

A young man, twenty-two years of age, was admitted on the 23rd March for extensive pulpy degeneration of the synovial membrane of the left knee, with incipient disease of the lungs. The former had existed for twelve months, and was making rapid inroads upon his health. The thigh was removed at its upper third on the 23rd ultimo; and when we examined the stump on the 5th instant, it had almost entirely healed, and looked remarkably clean and healthy from the way in which it was put up. The phthisical symptoms have completely subsided.

A second case was that of a man, aged forty-eight years, who, as we gather from the notes of Mr. Tuck, his dresser, was kicked by a horse on the knee twenty-one years ago, causing at that time a wound over the patella. He has been subject to frequent attacks of pain and swelling ever since. Three years ago the symptoms generally increased. Seven weeks back an abscess was opened at the side of the knee, and subsequently two openings had to be made to let out pus from the joint. The bones were much diseased, and he had suffered most acute pain. Considering his age and other circumstances, Mr. Hilton thought the most prudent course was amputation through the thigh, which he performed on the 5th instant, under chloroform. When placed in bed, the stump of this patient was carefully put up by Mr. Tuck in the manner already described, and we learn he is going on extremely well.

Tumor of the Parotid. — When a tumor extends somewhat deeply in the parotid space, its removal is often associated with a good deal of troublesome bleeding, even though no arterial trunk of any importance may be wounded. This fact we saw again verified, on the 15th of June, at University College Hospital, in a woman sixty years of age, who had been subject to a swelling in the left parotid space for from fourteen to sixteen years. Latterly, it had become active in its development, it was increasing in size, and getting soft at its most prominent part, where the integuments were discolored. This change Mr. Erichsen believed to be simple disorganization. The tumor was movable, and one portion dipped round the ramus of the jaw. Its attachments were considered not too deep for excision. It fully occupied the parotid region, although it did not involve the parotid gland; it was as large as the fist, and was in front

and below the ear. It was successfully removed, together with a small portion of the temporal muscle, but the temporal artery was unavoidably divided in the course of the operation. This gave rise to considerable hæmorrhage, which was only controlled, after the lapse of some time, by the aid of many ligatures and the application of the perchloride of iron. The tumor proved to be fibro-plastic, undergoing degeneration, disintegration, and actual calcification in that part of it which was situated behind the ramus of the jaw. On the second day after the operation, she was attacked by erysipelas, and was in a precarious state for some days, but she is now slowly recovering, and the wound is fast closing.

Some weeks back, Mr. Quain removed a tumor from the neck of a woman aged about thirty-four, which had been growing for fourteen or fifteen years. She was pregnant at the time, but this did not prevent the wound from healing very rapidly. She was subsequently discharged from the hospital quite well.

Double Fistula in Ano, treated by a Single Division of the Sphincter.—Although at first sight it may seem to be a trifling matter, whether one or more divisions of the sphincter ani muscle be made in cases of complicated fistula about the anus, in reality considerable importance should be attached to it if the future comfort of the patient is considered. There can be no doubt whatever, as we heard Mr. Ferguson remark, at King's College Hospital, on the 2nd instant, that if there are two or more divisions of the sphincter muscle, subsequent union does not permit of such an amount of control over its functions as when one only is made. Being aware of the truth of this from experience, he treated the case of a young woman, who had what might be called a double fistula, in the following manner: Three years ago she had an abscess in the perinæum, which burst externally at the margin of the anus; probably a second formed, which also burst externally, but the two cavities merged into one. This aperture, on examination, was found not to communicate with the rectum, and was, therefore, what is called, in surgical language, a *blind external fistula*, with a double opening. Instead of running a bistoury through the sphincter in two places, as we have seen done by some surgeons, Mr. Ferguson divided the skin between the fistulæ, and laid open the cavity to which they were the outlets. He then cut through the sphincter nearest the upper fistulous opening, in the usual manner, and the wound was carefully dressed from the bottom. Thus, by a very simple proceeding, the case was converted into one of ordinary fistula in ano.

The practical surgeon will at once recognise the benefits to be derived from an avoidance of multiple divisions through the sphincter ani.

BOOK AND PAMPHLET NOTICES.

A PRACTICAL TREATISE ON ENTERIC FEVER; ITS DIAGNOSIS AND TREATMENT: being an Analysis of One Hundred and Thirty Consecutive Cases, derived from Private Practice, and embracing a Partial History of the Disease in Virginia. By JAMES E. REEVES, M. D. Philadelphia: J. B. Lippincott & Co. 1859.

On finding we had a new work on fever to notice, we acknowledge we anticipated anything but pleasure in the task, supposing we should have some new theory of the disease to encounter, just as unsatisfactory and as fanciful as others we have hitherto had to animadvert on. We find, however, on perusal, all cause for such apprehension to be groundless. The author, wisely eschewing speculation, plunges at once *in medias res*, and proceeds to a practical consideration of his subject.

Dr. Reeves *in limine* objects to the term "typhoid," as applied to the form of fever in which we so frequently meet with a lesion of the lower fifth of the small intestines, and prefers that of "enteric," as being more precise, and essentially characterizing the disease. Now, it must be remembered that this lesion of the intestine which gives so much weight to the proposal of substituting the latter prefix, is not one universally present in the fever in question, and cannot therefore be looked on as an essential symptom; besides, it exists in other diseases without being necessarily accompanied by typhoid symptoms, and even in typhoid fever itself the severity of the disease is not always in proportion to the local affection. We are therefore disposed to retain the proscribed term until we get a better. In our present state of knowledge it has one advantage—it involves no theory.

That it is very rare to meet that remarkable condition of Peyer's and Brunner's follicles in other acute diseases, we readily concede; yet Peyer's glands have been seen both raised and red in scarlatina by Louis, and Brunner's follicles

more frequently still have been similarly affected in the same disease. We allow this lesion to be a very general concomitant of typhoid fever; but if we can show a single case presenting the same symptoms and observing the same progress of this fever, and yet on a post-mortem examination failing to manifest either an erythematous, an exanthematous or an ulcerated state of the ilium, we shall be justified in not considering the intestinal lesion as essential to typhoid fever. We can, in corroboration of our statement, with confidence, refer to the reports of the government fever hospitals of the United Kingdom, particularly those of Ireland, where this fever never ceases to exist,—where it, in fact, seems to assume a fixedness of endemic character.

The author proposes a division of the symptomatology of of "enteric" fever into three distinct forms: simple or mild, intermediate and malignant. This conduces to facility of description, and aids the student in arranging and comprehending the several phenomena thus systematically presented to his mind.

In the second chapter, we have a clear and faithful statement of the symptoms that usher in the affection, and of those which develop themselves during its progress. As the author proceeds, he dwells on the absolute and relative importance that attaches to each in diagnosis and prognosis. And here, in passing, we must say, that though our experience warrants us in sustaining his several statements in connection with this part of his subject, still we do not hesitate to state it would have, with advantage, admitted of further amplification. Every one who has seen practice, must be aware how valuable in fever the pulse is, in view to prognosis; yet here, about forty lines, and no more, are devoted to its consideration. There is no allusion to the abnormally slow or even the normal pulse of health occasionally observed in fever—both of serious augury. The slow pulse of convalescence and the other varieties of pulse with which practical men are familiar, are altogether unnoticed. The same observations will apply to every other symptom considered with a view to prognosis. Dr. Reeves has limited himself to a space within which he cannot profitably comprise so many and such important objects of enquiry. The chapter on "Anatomical Lesions" is simply correct, but adds nothing to

what we learned long since from the French pathologists. Much pains seem to have been taken in collecting the opinions of his medical friends respecting their views generally of the disease and their experience of its first advent to their respective districts. The replies to the author for the most part imply considerable intelligence and close observation of disease, both of which, from our personal knowledge of the profession in Virginia, we were quite prepared to expect. Our space will not permit us to follow Dr. Reeves whilst engaged in the task of searching out the causes, determining the duration and unravelling the complications of typhoid fever. We must hasten on to that part of the work wherein the treatment is considered.

The author advocates the employment of emetics at an early stage of the disease, whenever there is nausea and a bilious coating on the tongue. Sometimes, even at an advanced stage, he thinks, under certain circumstances, they may be useful. Though, under certain circumstances, the treatment of fever may with advantage be commenced with emetics, yet the administration of an emetic may be followed by the worst consequences—if there be tenderness of the epigastric region, or a tongue indicating any amount of gastritis, an emetic most probably may manufacture much trouble for the physician and danger for his patient. How often have we seen the tongue become dry and red, tympanitis rapidly set in and other grave symptoms quickly follow the ill-timed and otherwise injudicious administration of an emetic?

In the commencement of the volume the author very properly animadverts on the impropriety of increasing the irritability of the bowels by vain efforts "to purge off" what patients often considered a bad cold—yet under the head of treatment we find him approving of the administration in the early stage of a brisk purgative of calomel and jalap. This does not quite accord with our notion of safe practice. Two more dangerous medicines in typhoid fever cannot be employed. Many a disastrous termination can be traced to the employment, even at an early stage, of "a brisk purgative." We well remember the days of calomel and black draught—the deadly weapons with which each medical onslaught was commenced—with such

fatal effect to unfortunate patients, "*pollas d'ipthimous psuchas Aidi proiapsen.*"

Dr. Reeves next considers the expediency of giving small doses of mercury—"When the tongue is dry, the skin parched, scanty urine, diarrhoea and tympanitis, delirium or stupor, twitchings of the tendons, a small and weak pulse, the propriety of small doses of mercury, with a view to its specific effect, by some authorities, is urged with no little emphasis." He refers to Dr. Wood as an authority in support of its exhibition. This was the fashionable practice some twenty years ago or more, at the other side of the Atlantic, and worse could not be well conceived. It succeeded the mania in the profession for phlebotomizing, which was about the most murderous means medical ingenuity ever devised. If the former slew its thousands, the latter slew its tens of thousands.

"General blood-letting is now very rarely practised in enteric fever. Formerly the same caution and nice discernment now observed in its employment was not exercised, and to this, more than from any other cause, perhaps, may be attributed the very great increase in the number of recoveries in late years. In those cases which bear a severe character from the beginning, where headache is violent, increased sensibility to light and sound, the pulse full and strong, high fever, with a robust and plethoric habit, it may be proper to abstract a moderate quantity of blood from the arm; but unless it is resorted to during the first two or three days of the disease, it had better be omitted." This is eminently practical and exactly reflects our own opinion.

Veratrum viride, as a remedy in fever, next receives the author's attention.

When we consider that in fever the primary symptoms mark a depressed and enfeebled state of the nervous system, we question much the prudence that would suggest the administration of a medicine like *veratrum viride*, the action of which must either directly or indirectly increase the very state it is our aim to combat. Individually, we have no experience of the medicine in this disease, but nothing short of evidence, resulting from the extensive and careful observation of numerous

cases, suitably selected to test the matter, can reconcile us to its employment in a disease where its properties appear so little in accordance with the indications we have to fulfil. We regret our space will not permit us to pass in review the various other remedial agents advocated by the author. His views in reference to oil of turpentine, opium and astringents seem in the main correct. We think he might have dwelt with advantage at greater length on the complications so often to be encountered in typhoid fever. He certainly entertains a most profound respect for the opinions of Dr. Wood, whom he seems to consider the grand master, but he could have profitably extended his enquiries further and learned what others had done and are doing in the same field elsewhere. In a treatise like this we should expect that the labors of those who have been amongst the most distinguished of our profession, and whose opportunities for observation were most extensive, should not have been ignored.

This disease is one of those most common in the practice of the profession at the other side of the Atlantic, and one to which the attention of the profession in Britain, Ireland and France has been for many years most unremittingly directed; how strange then that a work specially devoted to this subject should be limited in the materials of its construction to a sphere of observation confessedly narrow and comparatively sterile! For the very accurately detailed anatomical lesions of the fourth chapter we are more indebted to the French School than to Dr. Wood, the object of our author's professional idolatry. Still, though we may not find this book altogether faultless, and in this it but partakes of what is incidental to all human productions, yet on the whole it is a practical and truthful volume—evidently written by one who loves his profession and has a practical knowledge of the subject. It is a book well calculated for the student, who can at once enter upon the study of the disease without having his mind confused by those learned yet unprofitable speculations that serve so frequently as a preface to works professing to treat of typhoid fever.

We acknowledge the receipt of the following books from W. B. Keen, 148 Lake street, and, excepting one already referred to, shall notice them more fully in next No. of the Journal :

The Action of Medicines in the System ; or, "On the Mode in which Therapeutic Agents introduced into the Stomach produce their peculiar effects on the Animal Economy." Being the Prize Essay to which the Medical Society of London awarded the Fothergillian Gold Medal for 1852. By Frederick William Headland, M.D., B.A., F.L.S., Licentiate of the Royal College of Physicians, etc., etc. Third edition, revised and enlarged. Philadelphia: Lindsay & Blakiston. 1859.

Alcohol: Its Place and Power. By James Miller, Professor of Surgery in the University of Edinburgh, Surgeon in Ordinary to the Queen for Scotland, etc., etc. From the nineteenth Glasgow edition. Philadelphia: Lindsay & Blakiston. 1859.

The Use and Abuse of Tobacco. By John Lizars, late Professor of Surgery to the Royal College of Surgeons, and lately Senior Operating Surgeon to the Royal Infirmary of Edinburgh. From the eighth Edinburgh edition. Philadelphia: Lindsay & Blakiston. 1859.

The Physician's Visiting List, Diary, and Book of Engagements, for 1860. Philadelphia: Lindsay & Blakiston.

THE DENTAL COSMOS.

We have received the first number of *The Dental Cosmos*, published by Jones & White, of Philadelphia, and edited by J. D. White, M.D., D.D.S., J. H. McQuillen, D.D.S., and Geo. J. Zeiglen, M.D.

The "*Cosmos*" takes the place of the "*Dental News Letter*," (quarterly,) and is to be a monthly publication; each number contains fifty-six pages. It takes a first rank among dental publications.

EDITORIAL.

NOTES OF SURGICAL OPERATIONS.

Under this head we propose to give from time to time, each month, when our space allows, a brief summary of the most
40*

interesting surgical cases coming under our observation during the month, with remarks and references to other similar cases heretofore observed. We are induced to offer these notices to our readers from the belief that the facts thus embodied will be interesting and valuable, and that many of these, for want of such notice, would be lost to science; and further, from the belief that the extent of the field for surgical observation in this city is but imperfectly appreciated. The operations of the lumber region, of the commerce of the upper lakes, of the numerous railroads centering at Chicago, of the manufactures of the city and vicinity,—involve a number of accidents as great, perhaps, as are to be met with in any other city of America or Europe, New York alone excepted; while patients with chronic surgical diseases resort hither, to some extent, for advice from five large States and two Territories, embracing a population of many millions.

It is our wish to make this field of observation available for purposes of instruction, for the improvement of the profession, and for the advancement of science to as great a degree as possible. This can only be done by a brief record of the cases as they present themselves, reserving their use in a more permanent form to another occasion.

1. *Foreign Body in the Urinary Bladder.*

We have recently removed a short pencil of plumbago and wood from the bladder of a man somewhat advanced in years, by the lateral operation of lithotomy. He is out of danger. This is our seventeenth operation without accident.

2. *Extirpation of the Globe of the Eye for Cancer.*

This operation was lately performed on a young child, four years old, for cancer of about one year's growth. The capsule of the globe was unaffected, and was left, which renders the operation much less serious than when it is necessary to remove more of the contents of the orbit. This child suffered no severe symptoms after the operation; her general health and the use of the sound eye were, indeed, improved. Many ophthalmic surgeons, in view of the rapid return of the disease,

condemn the operation. Walton, in his recent valuable work on the surgery of the eye, leans to this view. However unfavorable the result in this respect may be, it can scarcely be more so than the natural course of the disease. We had recently occasion to examine with Dr. Holmes a case in which both eyes were in the early stage of cancer. It was about four months since, and, at the present time, the disease is near its usual fatal termination.

3. *Trephining for Epilepsy and Insanity.*

This operation was performed on a man, thirty years of age, affected with epilepsy and some mental derangement for about four months. The point chosen was the left side of the occiput below the protuberance, the seat of a tumor which had existed for many years, and caused an absorption of the bone and a roughening of its surface. The two tables at the point of the operation were found consolidated and of an ivory hardness, and the skull of but half its natural thickness. The dura mater was vascular and adherent to the pia mater. The patient, who had been under the advice of Dr. Chambers, of Charleston, Coles Co., Ill., returned home three weeks after the operation, very quiet, and much improved in his health. If kept from the exciting causes of insanity, there can be little doubt of his entire recovery.

We have notes of five other cases in which this operation was performed for epilepsy, accompanied by more or less alteration of the mental faculties.

The first of these was that of a young man, John Ladrigan, cut upon the head at two points by an axe in the forests of Wisconsin. One wound extended from the median line, at the junction of the coronal and sagittal sutures, to the left side three inches. The edge of the axe penetrated the substance of the brain deeply, portions of which escaped. The other cut, also on the left side, followed the line of junction of the parietal and occipital bones, and was as deep and as long as the other. At each a large piece of bone was partially separated, one edge passing upon the brain, and the other rising above the surface of the cranium.

This man stated that he had been left as in a hopeless condition by the physicians who were called to see him, but recovered with the wounds in the condition we have mentioned, the right superior and inferior members being affected with paralysis and contraction. He was also subject to very frequent and severe paroxysms of epilepsy, which occurred sometimes daily.

This man was operated on before the class of Rush Medical College.

The whole of the displaced fragment of bone at the seat of the anterior wound was removed by three applications of the crown of the trephine. He recovered perfectly; had but one slight epileptic paroxysm afterwards, and gradually recovered considerable use of the members. No operation was performed on the posterior wound.

The second case was that of a young man from Kendall Co., Illinois. He received a blow above the ear, which fractured and depressed the skull without dividing the scalp. No operation was performed at the time, and he recovered, as was supposed. Six months afterwards he was seized with an epileptic fit. Three months afterwards, another occurred, and then one every month. One year after the injury, we removed the depressed portion with the trephine. He recovered, and the epileptic paroxysms recurred at lengthening intervals, until, at the last notice, six months had elapsed without a return.

The third case was that of a young man, kicked by a horse above the ear, fracture and depression being produced. Concussion and insensibility were the immediate results; after recovering from which, he remained insane, or nearly so. About four weeks after the injury, he was admitted into the wards of the so-called Mercy Hospital, where I used the trephine. Removing the depressed portions of bone gave immediate relief.

The fourth case was a man of fifty years, who, eleven years previously, had a fracture with depression in the temporal region. This gave rise for several years to no perceptible inconvenience. At length he began to be affected with giddiness and loss of consciousness, which, by degrees, became more fre-

quent, until the severer forms of epilepsy were developed. The mind was also affected by dementia to a degree which disqualified him for business. Removing the depressed pieces of bone gave great relief, and one year after the operation he was steadily improving.

The fifth case was not so favorable. A lad, about sixteen years old, came for advice in regard to severe epileptic attacks which had continued for several years. His friends stated that when an infant he had received a blow on the left superior part of the os frontis. On examining this part of the head, a depression was perceived, which, however, was soft and easily compressible. Although no bony surface could be felt at this point, yet the statement of friends of the patient that the blow had produced a depression, induced me to apply the trephine upon its margin. It was found, however, that the bone at that point was entirely absorbed; that surrounding it was in a condition of hypertrophy, very spongy and vascular, and three times its natural thickness. The soft parts presented this appearance in the point where the bone was deficient of venous erectile tissue.

In this case no benefit appeared to result from the operation.

From the four preceding, the inference is, I think, deducible, that leaving depressed pieces of cranium when there is neither wound of the scalp nor symptoms of compression of the brain, as is advised by most surgical writers, is attended by dangers not usually suspected, and that it is better, in all such cases, to raise up the depressed portions at once.

4. *Reduction of Dislocations of the Hip by Manipulation.*

A case of dislocation of the hip into the ischiatic notch came under our care, Friday, Sept. 17, which was readily reduced by following exactly the direction of Reid. It is the first time we have succeeded by this plan. The only other case of a similar kind in which we have attempted it was a dislocation on the dorsum of the ilium of six weeks' standing. Bearing in mind the fracture of the cervix femoris, said to have been produced by too forcible attempts of this kind by a surgeon of the N. Y. Hospital, we took care not to use too great force.

We seize the occasion, however, to mention some cases of dislocation into the thyroid foramen, reduced without pulleys or other mechanical power. The first of these occurred several years since, at Michigan City, Indiana. Attempts had already been made by a surgeon, who tried the pulleys and Jarvis' adjuster without success. We applied the pulleys, but the force deemed as much as could safely be used was insufficient. We then wound a stick of wood with a piece of quilted stuff, to about six inches in diameter, and having it pressed by an assistant against the perineum and firmly held between the thighs, we seized the ankles, and, the knees being straight, carried the two members towards and in a manner tending to cross each other, using the piece of wood as a fulcrum and the members as levers. The dislocation was readily reduced.

Since then two other cases of the same accident have been treated in the same manner with success. In one the patient was laboring at the time of reduction under the effect of shock from falling from a height. The bed-post was surrounded by a pillow, the patient drawn down so as to fetch this against the perineum, and the same manipulation used as before. The force required in this case was not great. In all these cases, except the first, the patients were placed fully under the effects of chloroform.

Judging from these, and a case in which we recently reduced a dislocation of the shoulder without the aid of assistants or mechanical means, it seems doubtful whether the force of the surgeon skilfully applied is not, with the aid of chloroform, sufficient to reduce any dislocation whose reduction ought to be attempted.

PROSPECTUS OF THE CHICAGO MEDICAL JOURNAL FOR 1880.

This Journal will be continued in its present size and form. It will embrace—

1. *Original Articles*, of value; communications from former contributors, and others are earnestly solicited.
2. *Book Notices*, embracing such mention of all important

works as will enable our readers to form a correct estimate of the value of each.

3. *Selections* of interest from American and foreign journals.
4. *Editorial* on subjects demanding notice.
5. *Miscellaneous Medical Intelligence.*

It will be the object of the editors to make the Journal valuable as a scientific and practical work, rather than a medium for discussion of medical politics.

We must here invite the attention of our subscribers to the importance of remitting our dues promptly. While a large number have already complied with our terms, there are, we regret to say, still many, well known to us as honorable and responsible gentlemen, who remain indebted to the Journal for one or two year's subscription. We respectfully and urgently solicit of these their immediate attention to this subject.

Terms, \$2 per annum, payable in advance; if not paid within three months from the commencement of the year (April 1, 1860), the price will be \$3.

THE Annual Course of Lectures in Rush Medical College will commence on the first Monday of November, 1859.

THE Surgical Clinic of the College will be held on Saturday afternoon of each week at the College.

DIED,

On Saturday, Aug. 20th, at Amboy, Lee county, Ill., HARMON WASSON, M.D., graduate of Rush Medical College, of the class of 1849.

THIRTEENTH ANNOUNCEMENT OF LECTURES OF
STARLING MEDICAL COLLEGE,
 FOR THE SESSION OF 1859-60.
COLUMBUS, OHIO.

The next session of Starling Medical College will commence on Wednesday, October 20, 1859, and will be continued without interruption until the 1st of March.

The Dissecting Rooms for the study of practical Anatomy, and the Hospital for Clinical Instruction, will be opened from the commencement of October.

The Museum of the Institution has now been made very attractive by the late receipts from France and Germany.

The College building now presents a fine appearance, the east wing having been entirely completed during the past summer.

FACULTY.

S. M. SMITH, M.D.,
Professor of Theory and Practice.

FRANCIS CARTER, M.D.,
Professor of Obstetrics, and Diseases of Women and Children.

J. W. HAMILTON, M.D.,
Professor of Surgery.

JOHN DAWSON, M.D.,
Professor of General and Special Anatomy and Physiology, and Dean.

S. LOVING, M.D.,
Professor of Materia Medica, Therapeutics and Medical Jurisprudence.

THEO. G. WORMLEY, M.D.,
Professor of Chemistry.

R. N. BARR, M.D.,
Demonstrator of Anatomy.

FEES.

Tickets of all the Professors, - - - - -	\$60 00
Matriculation Ticket, paid but once, - - - - -	5 00
Graduation Fee, - - - - -	20 00
Ticket for the privilege of the Dissecting Room, including the services of the Demonstrator, - - - - -	8 00

Subjects for dissection in the building, furnished at a moderate expense, on application to the Demonstrator of Anatomy, and in no other way.

There are two extensive Bookstores in Columbus, at which Medical works in great variety are sold at very low rates. Surgical, Obstetrical and Dissecting instruments are readily obtained.

All letters of inquiry will receive prompt attention if addressed to any member of the Faculty, or to
 Sept., 1859, 21.

JOHN DAWSON, Dean.